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ABSTRACT

Three separate projects were involved in this evaluation project. Project 1 involved teacher-participants, teaching staffs, and institute directors and asked their opinions about general institute performance and particular subject matter coverage. Project 2 focused on the teacher-participants only, investigating the effects of institute attendance on 1) their learning of subject matter content, 2) their attitudes toward students, and 3) their consideration of teaching strategies. Project 3 concentrated on the host colleges and universities, specifically seeking to explore some of the reactions and experiences affecting key educators. A sample of 94 institutes was involved, consisting of 30 in history, 13 in political science, 24 in educational media, and 27 in education of the disadvantaged. The total sample of teachers exceeded 3,000. The general consensus of comments by directors, staff members, and participants was favorable, many stating that the Institutes had effected some changes in their consideration and education of teachers although it was not possible to show statistically significant pre- and post-institute differences with regard to improved subject matter achievements. (MBM)

ED052147

FOREWORD

The Final Report, PROJECT IMPACT: A Pilot Study Evaluating the NDEA Summer Institute Program was prepared and submitted from the American Institutes for Research, Pittsburgh, Pennsylvania, by Evelyn Perloff, Clyde F. Kohn * and Robert D. Gatewood.

This document reports the research undertaken on a pilot basis during the period 1966 - 1970 in an effort to provide an evaluation of the impact of the summer institute program outlined by Title XI of the National Defense Education Act of 1958.

The PROJECT was a large-scale, pioneer effort to obtain data which would aid in arriving at an evidence-based judgment concerning the effectiveness of the program. Since it was an innovative effort, there were few guidelines from previous similar research that could be used as a foundation for designing the investigation. Accordingly, the PROJECT personnel were faced with the challenging task of inventing appropriate procedures on a pilot basis. The PROJECT personnel are to be congratulated that their research turned out to be as fruitful as it was.

The strategy was to mount a three-pronged attack on the basic question of the effectiveness of the institute program. ** Project 1, focussing on participants and institute staff, assessed attitudes and opinions concerning the effectiveness of the institutes. Project 2 sought to measure pre-to-post institute changes in the participants. Project 3 was intended to assess the influence of the institutes on the host academic institutions.

The report presents a wealth of detail on all three projects. Each of the three component parts is considered separately, since each is different in substance and methodology.

* University of Iowa

** The essence of the report is contained in the Summary, pages 1 - 5, and the Conclusions, pages 81 - 82.

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PROJECT IMPACT and its outcomes attest to the difficulties inherent in empirical research in real-life educational settings. The personnel of the PROJECT have done a fine job, and a courageous one. That their efforts were not more successful than they were should in no way reflect upon them; indeed, it is encouraging that as much information was yielded by PROJECT IMPACT as is contained in the report, which includes findings, observations, and suggestions that will be valuable to people involved in the design, planning, and day-to-day administration of future short-term institutes.

In sum, although technical difficulties made it impossible to demonstrate clear pre-to-post changes produced by the institutes, the institute participants, instructors, and administrators generally evaluated the institutes and their effectiveness positively. The large majority of people who have been involved in the NDEA Summer Institute Program believe that the institutes have improved the performance, knowledge, and perspective of the teachers who have had the opportunity to benefit from them, and that the Program has aided in a paramount contemporary social endeavor: the continual improvement of the teaching in our nation's schools.

Accordingly, the CONPASS Board conveys its thanks to the PROJECT IMPACT personnel for a difficult task taken on and accomplished with imagination and courage.

The Consortium of Professional Associations
for Study of Special Teacher Improvement Programs

December 7, 1970

FINAL REPORT

Contract No. OEC-2-6-001005-1005

PROJECT IMPACT:

A Pilot Study Evaluating the NDEA Summer Institute Program

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American Institutes for Research
Pittsburgh, Pennsylvania

For CONPASS

October 1970

The research reported herein was performed pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U. S. DEPARTMENT OF
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The study could not have been undertaken without the cooperation of many participants, staff members, and institute directors. The participants, in particular, are to be commended for their willingness to complete the Project 2 materials, often at times inconvenient for them. The importance of their contributions will be long remembered.

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IN SUMMARY

The major purpose of PROJECT IMPACT was to evaluate the educational impact of the summer institute program, as outlined by Title XI of the National Defense Education Act of 1958, upon the teacher-participants who attended and the colleges and universities that hosted the institutes. Under Title XI, programs were established to improve the quality of teaching and to provide training for educational personnel in order to help meet critical shortages in numerous disciplines. To accomplish these goals, the now well-accepted summer institute plan which has provided unparalleled training opportunities for thousands of school teachers was organized. At the same time, hundreds of college professors of diverse disciplines were brought into the business of training school teachers, heretofore regarded as taboo.

PROJECT IMPACT consisted of three separate projects, each describing a distinctly different aspect of the impact of the NDEA summer institute program. Project 1, involving teacher-participants, teaching staffs, and institute directors, asked their opinions relative to general institute performance and particular subject matter coverage. Project 2 focused on the teacher-participants only, investigating the effects of institute attendance on the following: (1) their learning of subject matter content; (2) their attitudes toward students; and, (3) their consideration of teaching strategies. Project 3 concentrated on colleges and universities which hosted these summer institutes, specifically seeking to explore some of the reactions and experiences affecting key educators at these educational institutions.

Typically, summer institutes enrolled about 40 elementary or secondary school teachers who were given daily instruction for six to eight weeks. Two or three courses were generally offered in addition to a "workshop" covering discussions of instructional methods and materials. The institutes often concentrated on a common subject matter theme, a set of general problems, or addressed themselves to articulating some of the instructional strategies specific to a discipline. For the most part, the courses were organized to present new material to teachers who had already been well-trained, instead of concentrating on remedial upgrading of poorly prepared teachers.

Since there were 12 different areas covering 493 institutes involving some 20,000 participants, it was clear that decisions had to be made for studying only a few of these to represent the NDEA summer program of 1967. Four areas were, therefore, selected to constitute the sample: educational media (the "hardware" components), history (the area with an earlier follow-up), political science (the most recent institute additions), and instruction for teachers of disadvantaged youth (the area for greatest potential attitude change).

This plan resulted in a sample of 94 institutes, and consisted of 30 in history, 13 in political science, 24 in educational media, and 27 for teachers of the disadvantaged. Since approximately 30 to 60 participants were accepted

by an institute, the total sample of teachers enrolled in the 94 institutes came to more than 3,000. With this relatively large number of subjects available, we felt confident that we would be able to draw upon a sample adequately representative for the development of educationally sound inferences vis-a-vis the institute program and its values to the teacher-participant.

PROJECT 1

Project 1 was the most general in nature, reflecting the objectives and preferences of a majority of institute participants and staffs. This study considered what actually took place at our sample of 94 institutes. Our plans centered on trying to relate stated summer institute objectives to actual activities offered at the institute. We wished to learn how much emphasis each institute gave to a variety of teaching objectives.

Since visits to each institute were not possible, we developed a questionnaire, the Survey of Institute Objectives, for obtaining the reactions of various members of the summer institutes--participants, staff members, and directors. Each of the four Surveys of Institute Objectives, one for each subject area, was a 50 to 60 item questionnaire dealing with the amount of attention placed on certain important objectives by a summer institute in that subject matter. Alternatives indicating how much emphasis was given varied from "none" to "very much" and all respondents (teachers, staff members, and directors) were asked to check the alternative which most nearly described their reactions to each statement. A second section of the Survey asked respondents to evaluate personally the importance of each of the major categories. That is, regardless of the attention given to these major topics by their institutes, the respondents were asked which categories of objectives they MOST and LEAST preferred.

The Surveys were scored by assigning one point for an answer of "none" to five points for an answer of "very much." Average scores were computed for both objectives and preferences, permitting us to compare the interests of respondents with the actual activities at the institutes.

Analysis of the Survey of Institute Objectives showed that: (1) institutes differed in the attention they gave to a variety of objectives; and, (2) participants, staff members, and directors disagreed in their evaluations of what happened at the institutes. Similar findings were obtained with regard to the preferences of the respondents. Thus, some institutes effectively met the interests of their participants, while others deviated considerably.

A final examination sought to highlight the differences between high- and low-rated institutes. While we noted that diverse conditions could account for the rating of an institute program, a frequent finding was that

the high-rated institutes received almost consistently favorable comments, whereas the low-rated institutes had numerous negative remarks. In general, high-rated institutes seemed to provide rewarding staff/director relations and well-organized programs. Low-rated institutes, on the other hand, tended to be criticized, with comments generally directed to a variety of conditions.

Unfortunately, preliminary reviews of proposals and catalogs (of the host colleges and universities) provided few clues to account for the differences between high- and low-rated institutes. There were, however, a number of promising leads to warrant further research in this regard.

PROJECT 2

Specifically, the objectives of Project 2 involved the teacher-participants who attended NDEA summer institutes, and investigated: (1) subject matter content and methodology; (2) personal and professional attitudes; and, (3) teaching strategies. Information for evaluating the success of summer institutes was obtained by measuring subject matter and methodological know-how through a simulated teaching process. This required simulation of a worksample of teaching behavior by developing a collection of items which were representative of the activities performed by teachers during a regular workday. Such activities were planning a unit or course outline, explaining a discipline's methodology and structure, discussing current approaches of a subject matter, ordering educational aids necessary for classroom presentations, and answering inventories investigating professional affiliations. Nine situations of this nature, referred to as the "Teacher's Mailbox," were presented to each participant in the form of memoranda, letters, questionnaires, and requests for information. In addition, a specially constructed Attitude and Opinion Survey and the Allport-Vernon-Lindzey Study of Values were administered to determine the degree to which summer institutes influenced the teacher-participants to change their value systems, self-concepts, aspirations, feelings toward children, notions of classroom discipline, and subject matter preferences.

Scoring keys for the Teacher's Mailbox items were developed on two bases: a content analysis of the pretest returns, and the counsel provided by subject matter consultants. In this way, reality (content analysis) was combined with theory (expertise). Two scoring systems for each Mailbox item were also adopted: The Quantitative Score was obtained by counting the number of content categories given by a respondent, while the Qualitative Score was an overall rating of this answer. Every answer sheet was given at least two independent assessments by subject matter specialists. Scoring the Attitude and Opinion Survey and the Study of Values was performed according to previously developed procedures.

Since the Project 2 design called for pretesting and posttesting, teachers were contacted during the spring of 1967 and asked for their cooperation in the present study. Those who volunteered to participate were mailed the three

project instruments in May, and three, again, in November of 1967. In this way, measures were gathered on these teachers both before and after their attendance at summer institutes. The final sample, representing participants from 94 institutes, consisted of 329 teachers, those who had responded to both administrations of the project instruments.

A repeated measures analysis of variance design was used and interpretations of the results made by both the PROJECT IMPACT research staff and the subject matter consultants. The general conclusion drawn, for our sample of teachers, was that there were no signigicant changes in (1) Mailbox performance, (2) personal attitudes, (3) professional affiliations, (4) value patterns, or (5) teaching strategies. These results do not necessarily indicate that the participants did not gain new insights about subject matter content and teaching strategies, but rather illustrates the difficulties so frequently encountered in seeking to show pre-post differences. The present approach contributed, however, a new dimension by permitting clinical assessments of the institute program for future restructuring. The Teacher's Mailbox allowed us to consider just such comparisons. Using: (1) the results of our analyses, (2) the written responses of the participants, and (3) the insights of discipline specialists, we were able to evaluate the summer institute program in terms of its effects on each teacher-participant and the overall impact of individual institutes for improving the quality of teaching. Discipline experts were able to assess the styles and information used by the teachers in their simulated teaching procedures and judgments made for correcting deficiencies. Furthermore, it was clear that teachers who attended summer institutes continued to feel positively about their institute experiences. That is, objective measurement of institute impact may have indicated little, if any, change by participating teachers, but subjective evaluation of their expectations of institute effectiveness continued to remain high.

PROJECT 3

The major focus of Project 3 was to determine the impact of the NDEA summer institutes on the colleges and universities which hosted them. As the third pilot study, this project elected to sample a small number of institute directors and faculty members, seeking to learn of any implementation of institute practices in their normal professional activities as a measure of impact.

To insure that we obtained answers to important and relevant questions, we decided to use a structured interview schedule. This procedure of asking all respondents the same questions maximized the number and comparability of responses while minimizing interviewer bias and intuitiveness. We continued to include the four subject matter areas selected for Projects 1 and 2.

Two considerations guided our selection of institutes: (1) university enrollment (we tried to choose three institutes in each discipline, according to university size: small, medium, and large), and (2) the number of years that these universities had hosted institutes, with two years required as a minimum. Our total sample, then, consisted of twelve institutes, three per subject area. All interviews were conducted individually, with the interviewer traveling to each of the twelve colleges or universities to talk with as many institute directors, institute staff members, and related faculty members as possible. Difficulties of scheduling and meeting arrangements precluded obtaining the same number and types of interviews at all twelve host institutions. Interviews were tape recorded where possible, with approximately 90 percent of the interviews so handled. All interviewing was done during the fall semester following the 1967 summer institutes.

Most of the taped interviews were brief, averaging about thirty minutes. Much of the information offered was of a descriptive nature in answer to the questions asked by our interviewer. The scoring procedure was a content analysis, and the frequencies of responses were tabulated to each question across people, using a single scoring key for all four areas. No individual was given a score of any kind, nor was any attempt made to weight the responses according to any predetermined definition of impact. Two raters independently scored each tape.

While we must caution against any broad generalizations of the present findings to all NDEA institutes, based on twelve summer institutes, the results do offer interesting indications of institute effectiveness. Thus, respondents from all four subject matter areas gave generally favorable reactions to the institute experience. Although some positive reports tended to be guarded, with some negative comments, the most common positive statement concerned the pleasant, rewarding nature of the institutes. In addition, it seemed to have awakened many faculty members to their responsibility in improving teacher education. Staff members from educational media institutes reported the most overall change; political science showed the least change, although some departments did modify their regular academic programs in some way.

A FINAL STATEMENT

In conclusion, the general consensus of comments by directors, staff members, and participants describing the 1967 NDEA summer institute program was favorable, many stating that the institutes had effected some changes in their consideration and education of teachers. While we were unable to show statistically significant pre- and post-institute differences with regard to improved subject matter achievements, we can conclude that a majority of participants enthusiastically endorsed and recommended their institutes, with a number stating that it was the best educational experience they had ever had. In fact, we would argue that this initially positive approach by participants to the educational process is the sine qua non for attitude and behavior change in the classroom.

INTRODUCTION

The National Defense Education Act was passed by the Congress of the United States in 1958. This bill was developed to create a comprehensive plan for supplementing education in the United States. With the unrelenting increase in apparent knowledge within every discipline, the concerns for dissemination and utilization had become pressing. Summer training fcr elementary and secondary school teachers in their respective subject matter areas was provided by the Congress as one solution to this urgent national educational need.

The reasoning and ideation behind the goal to improve the content and quality of American education need neither explanation nor justification. Few can disagree that education is our most important commodity and a primary guarantee for a better tomorrow. The question is, therefore, not with the "WHY" of such legislation, but rather with the "HOW." Few disagree that American education is in need of major repair. We need only note the many indicators that present practices are inadequately meeting the needs of students and teachers.

While we grant the simplicity of this statement in describing current conditions of American education, it is not our purpose to discuss the nature of the system or to offer a blueprint for its revision. The subject of the present report is to consider the merits of the NDEA summer institute program. That is, the primary objective of PROJECT IMPACT was to be the first independent evaluation of an endeavor to supplement the knowledge of classroom teachers by offering them a summer period of concentrated training in their respective subject matter specialties.

AN ORIENTATION

Before we describe our approach and findings, we should like to call attention to the following four issues, consideration of which, we believe, will contribute to a more meaningful and lucid interpretation of this evaluation. We recognize that for many this brief discussion may be unnecessary, but we suspect that it is preferable at this time to look on the side of commission rather than omission.

Of first importance is the fact that no single technique of measurement can be expected to satisfactorily supply all the answers we usually ask of a research study. While strict adherence to experimental design procedures can often minimize errors of all sorts, it is particularly difficult to follow such an approach in the educational domain where we find an intricate complex of subject matter, teaching methodologies, and individual differences. It is important, therefore, to remember that a variety of uncontrolled variables operate in a classroom, and any attempt to identify cause and effect relations between teaching and learning may from the beginning be idealistic and impractical.

Related to and following directly from the first issue is a second one which points out that the major goal of educational evaluation is the continual assessment of a program's effectiveness--to determine its strengths and weaknesses, and to revise accordingly. It is inefficient and unrealistic to accept or reject an entire program on the basis of a single set of statistical findings.

A third point we regard important is that evaluation can be "of the wrong kind, at the wrong time, and for the wrong reason." Careful planning helped PROJECT IMPACT heed these warnings: From the beginning, this study was: (1) not over-dependent on so-called "hard data" from indiscriminate use of standardized tests; (2) not undertaken too early in the development of the institute program; and (3) not concerned with final results in the statistical sense only.

The fourth issue, while unlike the previous ones, is perhaps of greatest immediate and practical significance. Here, we refer to assaying the concept of any training program as an ideal process for improving the content and quality of American education. That is, the originators and developers of a program are likely to feel that theirs offers the solution to all difficulties. This kind of thinking, while understandable, is undoubtedly naive. On the other hand, it is equally naive to accept early, negative results as sufficient evidence for the abandonment of an entire program.

In other words, no idea is at its inception likely to prove utopian. It is only after considerable effort is made toward clarifying crucial factors, and then attempts are made to make indicated revisions that a project which appears initially promising does, in fact, fulfill its expectations. This is a roundabout way of saying that the NDEA summer institute teacher training program, while not without faults, was a relevant and practical approach. Arguments implying that content, the basic ingredient of NDEA institutes, is not basic to good teaching are superficial and downright foolish. At the same time, the need to stress affective education, addressing teaching material toward the students' feelings as opposed to cognitive or intellectual learning, dare not be ignored. While PROJECT IMPACT was in its evaluation approach bound to the NDEA institute objectives, it hoped its basic orientation of continuing assessment would separate the wheat from the chaff. Above all, it sought to avoid labeling the summer institute program as either a "dramatic success" or a "dismal failure."

GENERAL OBJECTIVES

PROJECT IMPACT is best presented as three separate projects, each describing a distinctly different aspect of the impact of the NDEA summer institute program. Project 1, involving teacher-participants, teaching staffs, and institute directors, asked their opinions relative to general institute performance and particular subject matter coverage. In Project 2, we focused on the teacher-participants only, investigating the effects of

institute attendance on their subject matter learning of content and teaching strategies. Project 3 concentrated on colleges and universities which hosted these summer institutes, specifically seeking to explore some of the reactions and experiences affecting key educators at these educational institutions. To capture the full intent of the NDEA institute program, we found it necessary to develop, for Projects 2 and 3, sensitive and original measuring techniques. Accepting the difficulty and expense of such an undertaking, we agreed to operate on a pilot basis, selecting a small sample of respondents for inquiry and analysis in both projects. Accordingly, this approach limited final interpretations and generalizations.

THE SUMMER INSTITUTE PROGRAM

To the teaching profession of the not-too-distant past, summers meant traveling, relaxation, a respite from books and pupils' dirty looks. For the present crop, however, summer is a time for retooling. Large numbers of teachers return to school each summer to take supplementary work, primarily to increase their subject matter knowledge, and, if for no other reason, to upgrade their academic standing.

Recently, however, college and university campuses during the summer reflect a new vigor, an atmosphere of enthusiastic, spirited devotion to learning. It seems as if teachers, almost en masse, are returning to lecture halls, libraries, and laboratories. What makes it even more surprising is that competition is keen and payment is received for this experience. It's all part of the National Science Foundation, the National Defense Education Act (especially Title XI), the Higher Education Act of 1965, the Elementary and Secondary Education Act, and finally, the Education Professions Development Act.

Under the National Defense Education Act (NDEA) passed by the United States Congress in 1958, programs were established to improve the quality of teaching and to provide training for educational personnel in order to help meet critical shortages in numerous disciplines. To accomplish these goals, the now well-accepted summer institute plan which has provided unparalleled training opportunities for thousands of school teachers was organized. At the same time, hundreds of college professors of diverse disciplines were brought into the task of training school teachers, a task heretofore regarded as taboo.

In fact, the hope was that as a result of this interaction, a continuing dialogue between the universities and the elementary, as well as secondary, schools would ensue. This interaction was to result in close cooperation between the trainers of teachers and the teachers themselves, thereby ultimately insuring commitment and dedication by both groups to teaching children.

What, then were the patterns of these summer institutes, to which so many teachers seek entry? The NDEA and Arts and Humanities Institutes were designed for twelve subject matter areas including those areas of English, foreign languages, history, political science, geography, reading, teachers of the disadvantaged, and the creative arts. Typically, summer institutes enrolled about 40 elementary or secondary school teachers who were given daily instruction for six to eight weeks. Two or three courses were generally offered in addition to a "workshop" covering discussions of instructional methods and materials. The institutes often concentrated on a common subject matter theme, a set of general problems, or addressed themselves to articulating some of the instructional strategies specific to a discipline. For the most part, the courses were organized to present new material to teachers who had already been well trained instead of concentrating on remedial upgrading of poorly prepared teachers.

THE SAMPLE

Since there were 12 different areas covering 493 institutes involving some 20,000 participants, it was clear that decisions had to be made for studying only a few of these to represent the NDEA summer program of 1967. We were unanimous in our decision that only 4 areas were to constitute our sample. The areas selected were educational media (the "hardware" components), history (a previously studied area), political science (the most recent institute additions), and instruction for teachers of disadvantaged youth (the area for greatest potential attitude change).

This plan resulted in a sample of 94 institutes, and consisted of 30 in history, 13 in political science, 24 in educational media, and 27 for teachers of the disadvantaged. Since approximately 30 to 60 participants were accepted by an institute, the total sample of teachers enrolled in the 94 institutes came to more than 3,000. With this relatively large number of subjects available, we felt confident that we would be able to draw upon a sample adequately representative for the development of educationally sound inferences vis-a-vis the institute program and its values to the teacher-participant.

PROJECT 1

In a sense, Project 1 is deservedly "No. 1" because it was the most general in nature, reflecting the opinions and preferences of a majority of institute participants and staffs. Furthermore, the data gathered in this study permitted us to offer to the USOE its most important evaluation product--information for improvement and innovation. This study considered what actually took place at our sample of 94 institutes. Our plans centered on trying to relate stated summer institute objectives to actual activities offered at the institute. We wanted answers to a number of pertinent questions. What material was covered? What procedures were followed in presenting subject matter content? To name a few questions: Did an institute discuss such topics as professional journals and associations, classroom discipline measures, test construction techniques, audiovisual materials, and how children learn? Visits to each institute would have provided answers to these and many other questions, but this was not possible.

Instead, we compromised by developing a questionnaire for obtaining the reactions of various members of the summer institutes--participants, staff members, and directors. From our questions, we wished to learn how much emphasis each institute gave to a variety of teaching objectives. We recognized, of course, that respondent perceptions would not mirror precisely the actual institute activities, but we expected that these would yield much usable information.

GENERAL PROCEDURE

Our first move was to construct a measuring instrument, the Survey of Institute Objectives, to be administered several months after the completion of 1967 summer institutes. Each subject matter survey required that separate, but similar procedures be followed in its construction. This was necessary because each area had its own specific content and although institutes within the subject matter differed widely, they were much more homogeneous within the one area than among the four. The development of this scale involved: (1) perusal of pertinent summer institute proposals for specific and general objectives, (2) independent assignment of objectives into "like" groups by four IMPACT staff members, and (3) pretesting along with final reviews by measurement and subject matter specialists.

The Surveys of Institute Objectives were mailed during the late months of 1967. Political science surveys were forwarded earliest, in November, and Surveys dealing with teaching the disadvantaged were distributed last, after Christmas. To insure maximum return of the Surveys, we asked the respective professional associations to assist us; after all, the information desired about each subject matter area was of considerable interest to those within the profession who are becoming involved in teacher training. Each of

the four associations provided a letter of introduction signed by its director. This letter described the purposes of the questionnaire and was sent, along with a copy of the appropriate Survey of Institute Objectives and a return prepaid envelope, to all participants, staff members, and directors in our sample of 94 institutes. The number of individuals who received these materials was 3,656.

The Survey of Institute Objectives

Each of the four Surveys of Institute Objectives is a 50 to 60 item questionnaire dealing with the amount of attention placed on certain important objectives by a summer institute in that subject area. Alternatives indicating how much emphasis was given varied from "none" to "very much" and all respondents (teachers, staff members, and directors) were asked to check the alternative which most nearly described their reactions to each statement. The questionnaire statements were categorized by topic, with 7 to 10 groups in an instrument, and anywhere from 2 to 13 items within a category. There were obviously no right or wrong answers; only personal opinions and/or preferences were involved.

A final part of each Survey asked respondents to evaluate personally the importance of each of the major categories. That is, regardless of the attention given to these major topics by their institutes, the respondents were asked how important they felt each category was to them. This information gave us further insight regarding what subject matter content the participants wanted covered by their institutes. Again, the data would complement related information we expected to get from the Project 2 measuring instruments.

Scoring the Surveys consisted of coding each returned Survey with identification numbers signifying respondent, institute, and status of respondent (that is, participant, staff member, or director). The answers to the items were scored by assigning one point for an answer of "none" to five points for an answer of "very much." Average scores were computed for both the individual objectives and the categories of objectives listed in Section I. In this way, we could compare institutes by objective and by category of similar objectives. Average scores were also computed for Section II of the Survey, providing respondents' preferences for categories. This permitted us to compare the needs of the institute respondents with the actual activities of the institutes.

THE RESULTS

The returns of the Surveys of Institute Objectives averaged 61 percent for the four areas, and were higher than are usually found for most mail questionnaires.

These results are presented in Table 1.

Table 1

Survey of Institute Objectives Returns

Subject Matter Area	Surveys Sent Out n	Surveys Sent Out %	Surveys Returned n	Surveys Returned %
Educational Media	1080	100	752	70
History	1050	100	709	68
Political Science	539	100	276	51
Teachers of Disadvantaged Youth	987	100	499	51
Total	3656	100	2236	61

There was an interesting agreement among the areas in their respective rates of return: educational media and history had comparable rates (with 70 percent and 68 percent, an average of 69 percent), and political science and disadvantaged youth had identical rates (51 percent). The net average difference between these two pairs of oddly matched disciplines seems large (18 percent), but whether it has any significance for our immediate purpose is not at present discernible. Perhaps, for the moment, it is most reasonable to assume no explicable basis for this disparity in returns.

Analysis of the Items

Attention to Objectives

Two conclusions are clear from our data, although neither one is surprising. The first is that institutes differed in the attention they gave to a variety of objectives. The second is that participants, staff members, and directors disagreed in their evaluations of institute performance. These two conclusions held across all four subject matter areas.

The variations we found are shown in Table 2, which gives the lowest (0) and highest (5) participant values in each discipline (average value = 2.5). This same range held for staff member and director values. It is interesting to note that history institutes had the widest discrepancy (2.0), while institutes for teaching the disadvantaged varied least (1.1). A possible explanation may be that differences are related to a change in objectives from the time the proposals are submitted to the time the institutes are conducted.

Table 2

Highest and Lowest Values Reflecting Attention Given to Institute Objectives by Participants

Value	Educational Media	History	Political Science	Teachers of Disadvantaged Youth
Highest	4.0	4.4	3.8	4.3
Lowest	2.6	2.4	2.6	3.2

Most perplexing was the disparity among those who were students and those who taught at or directed summer institutes. While we did not expect perfect consensus on the kinds of information presented at institutes, we did anticipate moderate agreement among the groups involved. The correlations presented in Table 3, however, indicate otherwise.

Table 3

Correlation Coefficients — Between Participants, Staff Members and Directors — Showing Their Attention to Categories of Objectives

	Educational Media	History	Political Science	Teachers of Disadvantaged Youth
Participants & Staff	.56	.43	.57	.17
Participants & Directors	.35	.03	.34	.21
Staff & Directors	.42	.43	.59	.06

Of particular concern here is the lack of agreement among participants, staff members, and directors of disadvantaged youth institutes. We appreciate why these discrepancies existed during the early years of the institute program. At the same time, however, we believe that this is an important finding and has far-reaching implications for developing educational practices for teaching the disadvantaged.

Attention to Categories of Objectives

Analysis of the Surveys in terms of their major categories produced a number of interesting findings. These results are presented in Table 4. Perhaps of greatest importance are the two categories attended to MOST

(highest Survey values) by our institutes. Thus, institutes constituting our two content disciplines were, as they should have been, MOST attentive to increasing subject matter knowledge. We were also pleased to find additional evidence for an old recurring theme that the NDEA summer institutes motivated their participants, the first and, perhaps, most important phase preceding positive change and impact.

Table 4

Survey Categories Attended to MOST and LEAST by Institutes

Area	MOST Attended to Category	LEAST Attended to Category
Educational Media	Motivating the Participants	Relating Media to Reading, Communication, and Learning
	Developing Professionalism	Evaluating the Effectiveness of Media Programs
History	Increasing Knowledge of Subject Matter	Developing Professionalism
	Motivating the Participants	Emphasizing the Learning Process
Political Science	Motivating the Participants	Emphasizing the Learning Process
	Increasing Knowledge of Subject Matter	Developing Professionalism
Teachers of Disadvantaged Youth	To Identify General Aspects Relevant to Dealing with Disadvantaged Youth	To Promote the Appropriate Use of Media and Materials
	To Develop Knowledge of Community Agencies That Aid Disadvantaged Youth	To Develop Professionalism and Professional Skills
		To improve Teaching Skills

Also of interest are the LEAST (lowest Survey values) attended-to institute objectives. Granting that some categories must be sacrificed, the two categories so designated seem to be the proper ones. Developing professionalism is not, we believe, a first priority. Similarly, the necessary knowledge for emphasizing the learning process still remains, we suspect, very much a mystery.

Preferences for Institute Objectives

The second index value from the Survey of Institute Objectives sought to evaluate how important the major objectives were to participants, staff members, and institute directors. Our interest here was a comparison of the importance of objectives to respondents with the attention given to these objectives by the institutes. We derived this index by subtracting the "objective values" from the "preference values," hence the negative signs.

Again, we found extreme variability among the institutes. The lowest and highest participant index values are given in Table 5. That is, some institutes effectively met the interests of their participants while others deviated considerably. Although we have presented values for participants only, the same discrepancies held for the staff members and institute directors. This finding was, of course, unexpected in the case of directors, since they were responsible for the organization and development of their institute program from its inception.

Table 5

Highest and Lowest Index Values
of Preferences of Objectives to Participants

Index Value	Educational Media	History	Political Science	Teachers of Disadvantaged Youth
Lowest	-1.7	-1.7	-1.5	-1.2
Highest	-0.3	0.0	-0.1	-0.1

Additional evidence for this divergence between interest of subject matter objectives and institute attention to these objectives is shown by the correlations presented in Table 6. Fortunate, however, are the high correlations between participants' stated interests and the attention given to these at all subject matter institutes. Apparently, the objectives considered important to participants were those attended to at the higher-rated institutes, but overlooked at the lower-rated institutes.

Table 6

Correlations Between Preferences of Objectives and Institute Attention to These Objectives: Participants, Staff Members, and Directors

Group	Educational Media	History	Political Science	Teachers of Disadvantaged Youth
Participants	.89	.85	.89	.87
Staff	.90	.56	.71	.45
Directors	.56	.16	.52	.41

Preferences by Category

Our results describing the subject matter interests of directors, staff members, and participants provided additional insights about the institute program. Perhaps most striking was the small variability among major objectives of a subject matter area. Thus, it was clear from our data across all four disciplines that respondents, whether participants, staff members, or directors, considered most major categories of objectives listed in the Surveys about equally important to them personally. This was in contrast to their considerably greater variation in evaluating how much attention their institutes gave to objectives. In other words, it was frequently difficult to interpret the meaning of MOST and LEAST important because of the similarity in average ratings among the objectives listed in a Survey. There was no problem, however, in selecting the MOST and LEAST important categories. Table 7, which shows these results, lists (with two exceptions) only a single objective as MOST and LEAST important. Second place was often shared by as many as three other categories.

We might also point out that our three groups of respondents were in less agreement with regard to the objectives which they preferred than they were in rating institute attentiveness. Thus, while Table 7 lists a MOST and LEAST for all three groups, this may represent a compromise where only two of three groups agreed.

Table 7

Preferences by Category

Area	MOST Preferred Category	LEAST Preferred Category
Educational Media	Developing & Administering "Media Service" and "In-Service" Program	Relating Media to Reading, Communication, & Learning Developing Competencies in Working with Media
History	Increasing Knowledge of Subject Matter	Emphasizing the Learning Process Developing Curricula
Political Science	Increasing Knowledge of Subject Matter	Developing Professionalism
Teachers of Disadvantaged Youth	To Increase Understanding of the Needs of the Disadvantaged Youth in the Classroom	To Increase Knowledge of Curriculum & Curriculum Development

The High and Low Institutes

This part of the report describes our analysis of the relatively high and low institutes within each subject area of our sample. We hoped to learn the kind of factors responsible for these evaluations. What did participants look for in the NDEA summer institute program? What did they expect to get from the institute staff and director? How did they react to the teaching practices offered? Our desire to answer questions such as these and others provides, we believe, fundamental and insightful information to the U. S. Office of Education for: (1) revising summer institute programs, and (2) generalizing to other teaching and learning practices--all aimed toward increasing the effectiveness, relevancy, and efficiency of American education.

As a first step, we had to select our high and low institutes. After consideration of a large number of possible scores based on participant, staff, and director judgments, we limited ourselves to two evaluations. These were the values assigned by the participants to: (1) the objectives attended to by their institutes, and (2) the discrepancies between these ratings and corresponding interests in them. These two scores will be referred to, from this point on, as the Objective Score and the Interest Score, respectively.

Using these two criteria, we ranked all institutes in a discipline and then selected three to five of the highest and lowest institutes in each subject area. Table 8 presents the averages for the high and low groups. Inspection of these values shows identical patterns across the four disciplines, with clearcut differences between the high and low institutes for each subject matter.

Table 8

Average Objective and Interest Scores
for High and Low Institute Groups

Scores	Ed. Media		History		Political Science		Teachers of Disadvantaged Youth	
	Low	High	Low	High	Low	High	Low	High
Objectives	2.9	3.9	2.8	4.2	2.8	3.7	3.2	4.2
Interests	-1.3	-0.5	-1.1	-0.1	-1.1	-0.3	-1.1	-0.3

Information to help account for these differences comes from three sources: (1) comments on the Survey of Institute Objectives, (2) statements of purposes and procedure given in the original proposals, and (3) formal catalog descriptions of the colleges and universities hosting the institutes. We shall discuss each briefly, but the comments provided by participants offered the major source of data.

To use these comments, however, we first had to organize them into meaningful and relevant groups. We developed a scoring key of some twenty such classes, including, for example, comments on the Staff and Director, Teaching Methods Stressed, Institute Organization, and Emphasis on Subject Matter Content. The same scoring sheet was used for the four disciplines and scoring required a tally of all comments as either favorable or unfavorable. We shall present these analyses, by subject matter area, in the sections which follow.

Political Science

Comments for the high-rated institutes were almost unanimously favorable, many stating that the institute covered both content and teaching methods thoroughly. The following three groups receiving favorable ratings are consistent across the high institutes: (1) General Comments Describing the Rewarding Nature of the Institute Experience, (2) Reports of Positive Interactions Between Staff and Participants, and (3) Perceptions of Increased Subject Matter Competency.

With regard to General Comments, participants enthusiastically endorsed and recommended their institutes, and a number stated that it was the best educational experience they had ever had.

Comments on Staff and Director indicated that, for the most part, staff-participant interaction was excellent. "We were treated as equals, and the seemingly great gap between the professor and student was bridged." Similarly, "The director recognized our need as secondary school teachers, not as political scientists, and did his best to meet them."

Most of the comments speaking to either of the groups, Emphasis on Subject Matter or Teaching Methods included a comment about the other. For example, "The institute was excellent in its aim to give adequate opportunity for teachers to improve their grasp of content and methods in the political sciences." Also, "The combination of civics and education gave me the basis to help my students." Other participants had somewhat different perceptions about the balance of content and method, but they were still pleased with what they received. One said, "I feel the institute attempted to make me a better teacher rather than giving me more information in political science."

Low-rated institutes received more unfavorable comments than the high-rated institutes in each case. For the most part, these negative comments stressed the reverse of what appeared to happen at high-rated institutes, with additiona' negative references to poor institute organization.

In general, most comments about the low-rated institutes were critical. There were complaints about planning and organization, the discussion session, and the theoretical nature of the subject matter with little attempt toward practical classroom application. The general consensus with regard to the three lowest-rated institutes was that "they were a complete disappointment educationally," although very few said their "institute experience was a failure or worthless."

While it was difficult to tease out any clear-cut differences between the proposals of high- and low-rated institutes, it did appear that the high institutes were more general in their concerns for the content of political science. They did, however, speak pointedly to the importance of improving teaching skills and techniques. The low institutes specified highly detailed areas of content, sometimes esoteric in nature and difficult to insure understanding by those in attendance. These institute proposals also appeared to minimize emphasis on teaching methodology.

Another difference we noted was in the Special Criteria for Eligibility described in the original proposals. The high-rated institutes specified few special criteria, and where they did list any, these were by geographical area or teaching grade level. The low-rated institutes, on the other hand, enumerated such criteria as general excellence in undergraduate studies and letters of recommendation from former professors and high school administrators.

Unfortunately, only superficial accounts were available from catalogs describing the institutions hosting political science institutes. Furthermore, it was difficult to obtain comparable information from these catalogs.

One difference can be cited here, however. The three high-rated institutes were all conducted at universities with large undergraduate enrollments of over 20,000 students, while the three low-rated institutes were held at smaller institutions of less than 10,000 students.

History

Analysis of comments for the three institutes considered in the high group showed that two of these received no unfavorable comments, while the third had a few criticisms. General Comments was the only category which received numerous positive comments for the three high institutes. Organization of the Institute and Motivation Toward Professionalism were rated high in two of the three.

The high institutes were described by participants as stimulating, enriching, effective, and beneficial. Thus, many,quoting almost exactly the words of one participant said, "It was one of the best all-around learning experiences I have ever had."

For the most part, the high-rated institutes were considered well-organized and well-planned, with the result that participants believed the institute had a major impact on their teaching by encouraging them to incorporate many of the ideas and techniques of the institute into their courses. It was also clear from comments on Professionalism that the institute experience motivated participants to keep up and to develop a spirit of pride in their field of history.

The low-rated institutes are distinguished from the high group by the large number of negative comments, with no category rated favorably across all four low institutes. Three of these institutes received about equal positive and negative comments, and the fourth institute had almost all negative comments. No single category, however, was consistently unfavorable across all institutes. The Staff/Director category was rated low in two institutes, and the handling of Teaching Methods considered relatively poor in two institutes.

Responses in the latter category (Teaching Methods) further confirmed the observation that insufficient emphasis was placed on teaching methods by the staffs of the four institutes rated as low. Respondents complained that the lecture method was used excessively, and that there was not sufficient class participation or discussion. Some participants also pointed out that the institute program "tried to do too much for the time allotted."

In summary, we can say that the high institutes received almost consistently favorable comments, whereas the low institutes had numerous negative comments. Apparently, participants held polarized opinions of low institutes. Some insight into reasons for these differences of opinion may be found in the comment of one participant who said, "...Several of the participants reacted so negatively to the political views of many staff members that objectivity of these survey responses may be seriously questioned." This dissonant attitude by participants toward staff political views, again reflected by

the comment, "I was extremely disappointed because the director tried to impose his bias," has interesting implications for the acceptance of instruction. It is probably reasonable to assume that similar phenomena existed at several institutes, although we have a direct suggestion of such a relationship from only one institute.

A review of catalog descriptions for the seven institutions included among the high and low history institutes afforded no clues regarding possible factors responsible for the institute evaluation ratings. Thus, geographical locations of north and south described universities hosting both high-rated and low-rated institutes. Similarly, university enrollments did not differentiate the highs from the lows, since all host institutions were schools with less than 10,000 students. It is also of interest to note that the seven universities represented were predominantly privately endowed, with one Catholic university in both the high- and low-rated groups.

Examination of the proposals for the high- and low-rated institutes offers several interesting hypotheses which, after further study, could account for differences. For example, we can cite that the high-rated institutes tended to spell out their content objectives more specifically. They also, at least in this situation, seemed to stress problems of twentieth-century American history in contrast to stated objectives of the low institutes which preferred to relate American history to the larger domain of the past.

While we could not detect differences in other factors such as Criteria for Eligibility of staffs selected to conduct the institutes, we do believe that the programs described for the high- and low-rated institutes were different. Thus, we detected greater formality of teaching, in the usual graduate school manner at the lowest institutes. On the other hand, the three highest were conducted in a more permissive atmosphere, offering informal courses and seminars which were designed to meet the specific needs of the attending participants.

Educational Media

Participants attending educational media institutes were clear in what they expected from their NDEA summer institute experience. Thus, institutes in the high group were considered highly positive, with four among the five receiving almost all favorable comments. Two categories, General Comments and Staff/Director, consistently received positive comments across all five high institutes. Many participants offered statements similar to the following: (1) "I was tremendously pleased with the institute and believe that I obtained a wealth of knowledge on the use of different media"; (2) "The institute was a great learning experience"; and (3) "This summer was my most rewarding college experience."

Staff/Director comments were also numerous and strongly positive. These reactions were described as competent, friendly and inspiring, always willing to go that "extra mile." A third category which received a large number of favorable reactions by participants of the five high-rated institutes was the

Carry-over of Institute Experiences to Home Classrooms. Here, the general consensus is well reflected by the participant who said, "I am using more audio-visual materials than ever before, and hopefully, more beneficially." Related to these positive feelings of participants is the fact that whatever negative comments were offered, they were directed at excessive sitting and listening, with little participation in problem-solving.

The low-rated institutes again received a majority of negative comments. That is, participants' statements would indicate that while the low-rated institutes had both good and poor components, the high-rated institutes had few faults. In fact, even when favorable comments were made about the low-rated institutes, they were, it seemed to us, generally less enthusiastic and persuasive than those describing the high group. Only a single category, Organization of the Institute, appeared to get consistently unfavorable reactions. Participants complained that the low-rated institutes were poorly organized, with attempts to do too much and to cover too many topics.

A study of the nine applicable Institute proposals revealed three possible differences between the high and low media institutes. The first concerned the Criteria for Participant Eligibility. Here we noted that the high institutes were much more clear-cut and specific, seeking to demand that accepted participants show proof that they will be directly involved and responsible for a media program upon their return to school in the fall. In contrast, the low institutes stressed admission tests and grades. The second difference we noted was in the brief program outlines given in the proposals. It seemed to us that the high-rated institutes were specifically organized to survey the development and potential of educational media for today's classrooms while the low institute programs reflected a different orientation. Thus, one low-rated institute tooled up for instructional TV practices only while another discussed process rather than specific content. A third possible contrast showed up in the staffing category where the high-rated institutes tended to select their staff members (with institute experience) from their own university faculties, whereas a higher percentage of visiting faculty members (without indications of institute background) staffed the low-rated institutes.

A review of college and university catalogs provided no clues for discriminating between the high and low groups of media institutes.

Teachers of Disadvantaged Youth

Analysis of the Survey comments from participants who attended institutes for Teachers of Disadvantaged Youth indicated, that these institutes were considered either very high or very low. That is, participants from the high group offered no criticisms about their institutes, but respondents from the low group made numerous negative comments along with some positive statements. Furthermore, there were very few comments available for any of the high institutes. As a result, it is impossible to assess any specific areas of emphasis for the high group.

In contrast, teachers from the low group were freer with their positive and negative evaluations, with criticisms accounting for approximately one-quarter of all comments. In view, however, of the dearth of comments describing high institutes, we were at a loss to identify any consistent trends in the subject matter area. In fact, our general consensus was that the participants tended to contradict each other in their evaluations, making interpretations difficult, if not impossible.

Strangely, the low institutes appeared to be rated favorably: (1) on developing insight in the background and make-up of disadvantaged youngsters, and (2) on improving the ability to work with and teach the disadvantaged more effectively. Remembering, however, that these institutes were established for teachers of the disadvantaged, any information directed to understanding these young people may be judged to be valuable and positively reinforcing. The one category judged unfavorably by a number of participants at two of the low institutes was Organization of the Institute. In general, institute programs were considered unstructured to the point that some of the participants were not always sure what was taking place and others stated that there was much time wasted on inconsequential activities. While most participants complained about institute organization, there were some positive reactions, but these tended to be more general than the negative comments.

A review of the proposals of the high and low institutes for teachers of the disadvantaged revealed three categories we judged to differentiate between the two groups. These were Criteria for Eligibility, Program Development, and the Staff/Director. Thus, the high institutes specified participants who came as teams, particularly to include supervisors and/or principals. The low institutes sought classroom teachers with no additional specifications required. With regard to program development, the high institutes seemed to offer carefully thought-out programs. They succinctly clarified the roles of theory and practicums, with detailed descriptions of how they planned to work with disadvantaged children. Staff selection at the high and low institutes showed similar differences. Here, we found that the high institutes emphasized the psychological and social backgrounds of their faculty, while low institutes preferred the educator, particularly with university affiliation. It was also interesting to note that both high and low institutes appointed staff members with previous institute experiences.

PROJECT 2

OBJECTIVES

Concerned only with the impact of institute participation on the teachers who attended summer institutes, the objectives of Project 2 concentrated on: (1) subject matter content and methodology, (2) personal and professional attitudes, and (3) teaching strategies. These were only three from among many factors originally considered, and included the following formal statements of their meaning and significance:

(1) Subject Matter Content and Methodology - Skills of the discipline, understanding the structure of the discipline, participants' understanding of the nature of their discipline, and sensitivity to discipline methodology and content.

(2) Personal and Professional Attitudes - Commitment to the discipline, concern for teacher education, felt needs, values, self-concepts, and attitudes toward subject areas.

(3) Teaching Strategies - Testing, use of pedagogical techniques as an integral part of the learning process, concern for awareness and use of learning principles, and individual differences.

THE MEASURING INSTRUMENTS

Content

The realization that we were dealing with as many as 94 possible tests meant, of course, that the number of objective test items required to measure these areas would be astronomical, not only in actual number but in cost as well. Furthermore, the emphasis of Title XI of the National Defense Education Act in funding summer institutes was to meet such broad goals as understanding the nature and structure of a discipline, showing greater sensitivity to discipline methodology and content, having a commitment to the discipline, revealing a concern for teacher education, using pedagogical techniques as an integral part of the learning process, and showing interest in learning theory and individual differences.

To measure these groups, we adopted a simulation approach. This method required us to simulate a worksample of teaching behavior by developing a collection of items which were representative of the kinds of activities

performed by teachers during a regular workday. This approach is generally referred to as the "in-basket" technique and was first described by Norman Frederiksen for use with administrators. Teachers, however, receive almost all communications, memos, assignments, etc., in a mailbox rather than an in-basket. Hence, we designated our in-basket test the "Teacher's Mailbox."

The Teacher's Mailbox

The Teacher's Mailbox is a self-administered situational test in written format. It projects a teacher into a realistic situation, requiring him to handle tasks like those he encounters in his regular teaching activities. That is, the teacher-participant is asked to play a role--that of a teacher. Through this kind of real-life involvement, we hoped to learn how the teacher-participant had been affected by his institute experience--in respect to the substantive content and the methodology of his discipline and to the means by which he could communicate that knowledge to his class. This was, indeed, the closest we could come to observing the actual teaching behavior of the participant.

Directions stressed that each participant play himself, in his own school, carrying out his regular teaching assignments. The only changes from the real-life situation were those involving the labels of individuals and places. Thus, we gave the examinee a new name, Richard Williams, whose school was Lindenwood School located in Linden City. His principal was named Robert Grant, and the superintendent of schools, Everett Collins. Other friends and colleagues, institutions and organizations, also bore fictitious names. These names were the same for all participants, but they represented a variety of different individuals and schools. As a final aid, we included appropriate supplies (stationery, envelopes, notepaper, pencils, pens, and paper clips) necessary for completing the Mailbox items.

The situations which we developed for an area included items seeking to measure a participant's knowledge of his subject's: (1) technical vocabulary, (2) fundamental literature, (3) characteristic methodologies, (4) relationship to other areas, and (5) professional organizations. These items were then couched in terms of authentic on-the-job teaching assignments and teacher chores, like memos, letters, and questionnaires.

Very early in our instrument development, we believed that the same simulated situations might be used for all four disciplines, but this belief was found to be naive when we began in-depth analysis of subject matter content. As a result, we scrupulously avoided forcing similarity across subject matters, although we were able to adapt one or two topics for all areas. After careful review, pretesting, editing, and revision, we were satisfied that the nine items selected in each subject matter area adequately sampled the appropriate content and met our objectives for Project 2.

Scoring the Mailbox. Scoring keys for the Teacher's Mailbox items were developed on two bases: a content analysis of the pretest returns, and the counsel provided by subject matter consultants. This approach was our way of combining reality (content analysis) with theory (expertise). After they

were independently reviewed by subject matter specialists, the subclasses derived from the pretest content analysis by PROJECT IMPACT staff members and the "ideal" answers supplied by subject matter specialists were incorporated into a single scoring key for each Mailbox item. Each scoring key was arranged to include a listing of subclasses on the right-hand side of the page, while the left was reserved for indicating the presence (stated) or absence (not mentioned) of the topic in a participant's answer.

To learn as much as possible about a participant's knowledge of his subject matter, we decided to use two scoring systems for each Mailbox item. These we called Quantitative Scoring and Qualitative Scoring. The Quantitative Score was obtained by simply counting the categories checked in the Stated Column.

The Qualitative Score was selected to give an overall evaluation of the respondent's answer, regardless of what contributed to his Quantitative Score. The Qualitative Score was a rating based on a six-point scale ranging from unsatisfactory to excellent. In addition to the scale, every Qualitative Answer Sheet, one to each Mailbox item, briefly summarized for the scorer the major points that participants should include in their answers to that communication. And finally, examples of nine responses were provided to assist a scorer in establishing references for evaluating the response to be scored. The nine examples, three for each group, represented three quality ratings, Excellent, Average, and Poor.

Every answer sheet was given at least two independent assessments. In all cases, the subject matter scores included those individuals who had been asked to develop the scoring keys.

Test Reliability. Recognizing the complexity of scoring, we agreed to the importance of having two scorers serve as independent checks on one another. This procedure also enabled us: (1) to estimate the reliability or consistency of the Teacher's Mailbox scoring procedures, and (2) to combine the two ratings for a more dependable final score.

The reliability estimates were obtained by correlating the scores of our two raters for all Mailbox items and then getting an average correlation coefficient for the seven letters in each subject matter area. Table 9 presents these results for both the Quantitative and Qualitative Scores.

Table 9

Teacher's Mailbox Average Inter-scorer Reliability Correlation Coefficients

Subject Matter	Quantitative Score	Qualitative Score
Educational Media	.65	.85
History	.62	.76
Political Science	.56	.58
Teachers of Disadvantaged Youth	.54	.56

Unexpectedly, in view of the few categories required for qualitative scoring, the reliability correlations are higher for this system than for the Quantitative Scores. The inter-scorer reliability differences between the two scoring systems are greater for educational media and history, but show little variation for either political science Mailbox items or those from the Mailbox for teachers of the disadvantaged. Similarly, we were not surprised to find that the rating system followed to score educational media responses was the most reliable, while scoring responses concerned with teaching the disadvantaged was least consistent. It was evident at the time the Mailbox letters were constructed that our educational media consultants were developing items highly specific to their area, whereas it was far more difficult even to determine a specific body of information, no less to write questions on it, that could be referred to as appropriate to working with disadvantaged youngsters. The diversity of items included in the Teacher's Mailbox for teachers of the disadvantaged attests to this difference, with scoring also being more subjective and relying more heavily on the personal interpretation and biases of the scorers. Measurement and scoring in the fields of history and political science would seem logically to fall somewhere between these two extremes. Our data support this position.

Test Validity. This discussion on the validity of the Teacher's Mailbox is based on data collected during the pretesting stage of the Mailbox administrations. It presupposes knowledge of these pretest results and may not be completely clear until the results section has been read. We believe, however, that this preliminary analysis of the Mailbox validity is most appropriately presented at this point.

Initial evidence of the validity of the Teacher's Mailbox for each subject matter area was obtained from comparisons of the performance of participants on five relevant dimensions. Thus, we compared the pretest averages of teachers from large and small schools, from elementary and higher public schools, from large and small communities, with B.A.'s and M.A.'s, and with more and less than seven years' teaching experience. Since similar results were obtained for these comparisons in all four subject matter areas, we shall illustrate with examples from a single discipline, history. These Mailbox data are presented in Table 10.

Table 10

Teacher's Mailbox Pretest Averages -
History Participants

Comparison Group	Quantitative Score	Qualitative Score
Fewer than 900 Students	23.1	3.2
More than 900 Students	27.0	3.6
Cities with Fewer than 50,000	23.3	3.2
Cities with More than 50,000	27.6	3.7
Less than 7 yrs. of Teaching	24.0	3.2
More than 7 yrs. of Teaching	26.1	3.5
Elementary Teachers	22.3	3.1
Junior/Senior High Teachers	25.8	3.5
B.A. Degrees	24.5	3.3
M.A. Degrees	25.8	3.5

Examination of the five groups of pretest comparisons shows the following: (1) the large school and large city teachers outscored their small school and small community co-workers; (2) participants with seven or more years of teaching experience and/or teaching in junior-senior high schools had higher pretest Mailbox averages than those who had less than seven years of teaching experience and/or were elementary school teachers; and (3) teachers with Master's degrees tended to perform higher than those with only Bachelor's degrees. The superior performance of the experienced and better educated teachers, while not necessarily statistically significant, is in the desired direction and provides favorable evidence about the validity of the Mailbox letters. Further research and analysis are, of course, necessary before we may conclude that the Teacher's Mailbox is a valid assessment instrument.

Attitude Assessment

The assessment of attitudes in behavioral evaluation studies has long been popular. Since society today requires a far greater understanding of attitudes, their measurement is an indispensable part of behavioral investigations. Hence, PROJECT IMPACT recognized the importance of attitudes, their formation as well as their covert and overt manifestations, to the teaching profession.

A fundamental and apparent dimension of impact is the change in teacher attitudes resulting from the institute experience, although we readily admit that a six-to-eight week period is a very short span of time for major or enduring attitudinal changes. Attitudes reflect deep-seated dispositions which are not easily modified. Furthermore, the primary institute objective almost inevitably concentrated on subject matter content, barely involving attitudinal factors, at least not deliberately or consciously. Since, however, a favorable attitude is probably at least a necessary, though not necessarily a sufficient reason for mastery of new subject matter materials, we felt compelled to learn something about teachers' values, self-concepts, aspirations, feelings toward children, notions of discipline, and subject matter preferences. We, therefore, developed the PROJECT IMPACT Teacher Attitude and Opinion Survey. All items were of the objective variety and the Survey was completely self-administering.

The Attitude and Opinion Survey

We drew the majority of the items for this instrument from the following sources. The "Attitude and Gratification Preference Schedule" and the "Motivation for Teaching" both by Stern and Masling furnished the bulk of the material for Scales I and II. Scale III was based on the "Teacher Characteristics Schedule," an instrument resulting from Ryans' comprehensive and painstaking research assessing teacher characteristics. The last section, Scale IV, was taken from an inventory developed by Prince to answer what effects the differences in value structure, specifically, "traditional" vs. "emergent," may have on the satisfaction, confidence, and effectiveness of individuals within the school system.

The 204 items comprising the PROJECT IMPACT Attitude and Opinion Survey were scored by adapting the scoring systems of the original scales, from which these items were taken, to the needs of Project 2. We felt it was necessary to modify the scoring keys because the three original attitude scales had been developed to meet objectives somewhat different from ours.

Our sample for this part of Project 2 included all participants who had completed both the pre- and post-Attitude and Opinion Surveys, regardless of whether they had returned the Teacher's Mailbox items. Using this group as our sample increased our total number to 688 and permitted several statistical analyses requiring a larger number of cases than our pre-post sample.

Related to the concept of attitude is another of our Project 2 goals, that is, to consider the role of value characteristics in the teaching process. For our study, a necessary corollary was to determine what, if any, changes in the value structure of teachers we might expect from a summer institute experience. Again, we were probing for additional personality information because the personality of the teacher is so basic to teaching performance.

The Study of Values

Since we viewed Project 2 as a pilot study, we preferred to select only a few relevant factors characterizing the dynamics of teacher personality, i.e., his attitudes, values, and self-concept. In addition, we wanted a well-researched instrument to serve as a kind of bench mark against which we could compare the results from our newly devised Teacher's Mailbox and Attitude and Opinion Survey. Our choice was, then, the Allport-Vernon-Lindzey (AVL) Study of Values. This Study of Values is not only an objective, self-administering instrument, but it is also easily scored and interpreted by a respondent. We encouraged our participants to score their own scales, hoping that the results would prove personally informative and rewarding. Furthermore, we believed that this scoring would reinforce our assertion that the instruments we developed were not meant to be tricky, misleading, or deceptive. They were one part of a sincere and honest attempt to appraise the impact of the summer institute program.

The AVL Study of Values seeks to measure the relative prominence of six basic personality interests or motives: theoretical (interest in the discovery of truth), economic (interest in what is useful), aesthetic (emphasizing form and harmony), social (valuing altruistic love or philanthropy), political (interest in power, although not necessarily in politics as such), and religious (seeking of unity, relating the self to the totality of the cosmos).

The AVL is an ipsative scale. That is, a high score on one of the six scales can be achieved only by obtaining a lower score on at least one of the other five scales. Therefore, the Study of Values indicates the relative importance of these six values for an individual, rather than their absolute importance. The fact that one respondent is highly concerned with the values while another feels quite differently will not be reflected in their scores. Rather, only the relative importance of the values will be provided.

The scale consists of two parts requiring a total testing time of about 15 minutes. Part I lists 30 controversial statements or questions and asks the respondent to indicate his personal views by selecting the alternative that is relatively most acceptable. Part II contains 15 situations or questions followed by 4 possible attitudes or answers. The respondent is asked to arrange these answers in order of his personal preference.

Previous research with the AVL has shown that significant differences in values do exist among teachers in different subject matter areas. We questioned, however, whether the relatively short summer institute program could seriously affect the resulting value patterns.

WHAT WAS DONE

Selection of Subjects

Recognizing the pilot or exploratory nature of the study, we agreed that a modest though adequate sample size would be 100 teachers in each subject matter area. We then sought to determine how many participants would have to be contacted at each stage of our study in order to reasonably expect 100 usable subjects in each area.

Five principles guided our thinking at this time. Foremost, we acknowledged that our teachers as research subjects could not be expected to cooperate any more than other research subjects, notwithstanding the fact that the teachers had been chosen to attend summer institutes. Second, Project 2 was to demand much more from a subject than does the typical evaluation study. Next, participation was on a volunteer basis. Fourth, the timing for pretesting was an unfortunate selection, coming during those inevitably busy and exhausting final weeks of the school year. And finally, we recognized the pitfalls of having to adopt a mail approach due to the problem and costs associated with an initial plan of establishing testing centers strategically dispersed across the country.

These constraints helped us develop a realistic forecast as to the attrition we might encounter at the various states of our data collection. If we started with a group of 1,000 participants in subject matter and anticipated that 50 percent of the group would volunteer, we should get a sample of 500 teachers of pretesting. Then, expecting 50 percent of this spring pretesting sample of 500 teachers to participate, we assumed 250 would return the test materials. And finally, our judgment, plus a study of results obtained in survey research in general, suggested only a 40 percent return at fall posttesting when test kits would be forwarded to those 250 who had returned pretests. The 40 percent return at this time would provide the final pre-post samples of 100 teachers in each discipline.

The returns by subject matter area are shown in Table 11. You will note, of course, that our actual total volunteer sample, 48 percent, closely approximated our prediction of 50 percent, with the smallest percent of history teachers volunteering (43 percent), and educational media personnel being most agreeable (54 percent).

Table 11

Teacher-Participants Who Volunteered for Project 2

Subject Matter	Letters Sent		"Yes" Postcard Returns	
	n	%	n	%
Educational Media	841	100	451	54
History	1015	100	440	43
Political Science	972	100	311	52
Teachers of Disadvantaged Youth	594	100	433	45
Total	3422	100	1635	48

Predicted - 50% Returns

Actual - 48% Returns

The representativeness of the sample is a consideration of importance in all research. Frequently, however, this may be only academic, since parameters are unavailable for determining the degree of representativeness attained. Fortunately, we were able to investigate some dimensions of our sample by comparing it on a number of biographical items with the total group of participants who attended our 1967 sample institutes. This demographic information was obtained from the USOE Application Record Card. Some factors we believed might be pertinent and informative were the following: (1) age, (2) sex, (3) total years of teaching, (4) highest degree held, (5) undergraduate and graduate majors, (6) private or public school system, (7) school environment, (8) attendance at a previous NDEA institute, (9) level of school system, and (10) location of school. We are the first to admit, of course, that the fact that these factors were available and measurable does not necessarily mean that they are those meriting attention. Surely, however, this opportunity to make any kind of comparison is not only unusual but highly desirable. We were fortunate not only because we were able to make such comparisons but also because our pre-post sample turned out to be representative, in almost all respects, of the much larger group of teacher-participants who attended all our sample institutes. The results of this analysis will be discussed under The Samples in the section, WHAT WAS FOUND.

Pretesting

Pretesting was a two-stage transaction. The first stage was the distribution of the Teacher's Mailbox, and the second, the attitude questionnaires. Mailing was spaced so that the teacher-participant would have completed or nearly completed the Teacher's Mailbox before he received the

questionnaires. This was planned primarily because the Teacher's Mailbox was a simulated test situation stressing a role-playing atmosphere, while the attitude inventories required honest, personal, self-appraisals.

Table 12 shows the pretest returns in terms of predictions and actual results. The table consists of three parts: results by subject matter area for the Teacher's Mailbox, results by subject area for the attitude scales, and results for the Teacher's Mailbox and attitude scales combined. This information is based on the number of tests initially sent to teacher-participants who agreed to participate in Project 2 and attended institutes in our sample. This number is 1,362 for all disciplines and becomes the total group (100 percent) on which we base our pretest predictions.

Table 12

Project 2 Pretest Returns

Tests by Subject Matter	Tests Sent Out n	%	Predicted Returns n	%	Actual Returns n	%
(1) Teacher's Mailbox	1362	100	681	50	625	46
Educational Media	374	100	187	50	223	60
History	355	100	177	50	127	36
Political Science	258	100	129	50	114	44
Teachers of Disadvantaged Youth	374	100	187	50	161	43
(2) Attitude Scales	1362	100	681	50	740	54
Educational Media	374	100	187	50	230	61
History	355	100	177	50	156	44
Political Science	259	100	129	50	139	54
Teachers of Disadvantaged Youth	374	100	187	50	215	57
(1) and (2) Combined	2724	100	1362	50	1365	50
Educational Media	748	100	374	50	453	61
History	710	100	355	50	283	40
Political Science	518	100	259	50	253	49
Teachers of Disadvantaged Youth	748	100	374	50	376	50

Accordingly, we predicted that 50 percent or 681 teachers would return the Teacher's Mailbox materials. There were 46 percent or 625 teachers who returned Mailboxes, with history teachers returning the fewest proportionately (36 percent), and educational media participants providing the highest returns (60 percent). The average loss (decrement from expected 50 percent) of obtained pretest Mailboxes, approximately 2 percent, was due, we feel certain, to the many pressing obligations and commitments demanding a teacher's attention during the final weeks of the school year. The Teacher's Mailbox with its time-consuming requirements would, under those circumstances, hold little allure. These results meant that comparison of the pre-post sample with the total group of participants became even more imperative than we had contemplated earlier.

On the other hand, the obtained attitude scale returns were, with one exception, all higher than our predictions. That is, 740 teachers in all four subject matter areas, or 54 percent, returned the attitude scales, whereas we predicted 681 teachers (50 percent) would so cooperate. Only history teachers (44 percent) did not surpass our 50 percent prediction. In all disciplines, however, more teachers were willing to complete the attitude inventories than the Teacher's Mailbox materials. This is, perhaps, to be expected, since we all find it easier and quicker to fill in blanks with check marks than discuss, in writing, items concerned with concepts and/or principles of a discipline.

When the returns of both the Mailbox and attitude scales were combined, we found that our Actual Returns (50 percent) were the same as the Predicted Returns for all four areas (50 percent). Again, teachers at history institutes gave the poorest returns of PROJECT IMPACT predictor instruments (40 percent), while teachers who attended educational media institutes made the best showing (61 percent).

General Reaction to Project 2

Disappointed by the Mailbox returns, we were rewarded by the number and kinds of comments we received about the Mailbox itself. Generally, the response to Project 2 was one of overwhelming interest in the study and anticipation of a valid report for future use by teachers interested in improving their school communities. Listed below are just a few verbatim replies complimenting the project itself and those who designed it. The typical reaction to the Teacher's Mailbox by those who agreed to participate was, "I am most proud to be asked to participate." There was obviously initial interest shown, although many were forced to decline any reply to the Mailbox contents because of lack of time at the end of the academic year. Those who did follow through included many who thoroughly enjoyed the work, while others apparently needed more time for completing their answers in detail.

There were only about ten people who wrote to us expressing a desire not be be bothered at all with the materials because of various reasons. These included people who felt that the questions were ambiguous or not at

all connected with their professions. None of them, however, completely eliminated the idea of having a project such as this, but instead they gave their own suggestions as to how it should be run. Time was the major factor which kept many from participating and most of them would have done so if the contents had been mailed earlier during the year.

Some Verbatim Replies from Pretest Participants

"Answering this mail has been a real learning experience. I am looking forward to the summer at _____. If PROJECT IMPACT is any indication of things to come, this should prove to be a challenging summer. In closing, I congratulate you on the efficient manner in which the project was organized."

"I think your letters were very challenging and well thought out. If I again may be of service to you, feel free to call on me."

"Your approach is refreshing and your materials are excellent."

"Even though I did not fill out the replies--the ideas were thought-provoking and have had an evaluative effect on me."

"The work proved interesting and I feel better informed about educational media because of all the investigating I had to do."

"This experience has strengthened my desires to participate in the NDEA Institute at _____ this summer, and given me the needed stimulus to champion the cause of disadvantaged youth. I'm exhausted, but it was worth it."

"I really loved doing it and found it very thought-provoking--and that in itself is very worthwhile."

"I was very enthusiastic about PROJECT IMPACT, and, in fact, I still am. I love the pretense. I did look at the Mailbox and felt that it would be a challenge."

"I am grateful for having had the opportunity to 'air' some of my views. I believe it has helped me to solidify my own thinking on many issues. The school system within which I work does not usually provide such opportunities."

"I completely enjoyed participating in PROJECT IMPACT. I feel sure that much good will come from your work."

"God bless your work."

"This has been most enjoyable, and I feel practical. I am sure we need more honest evaluation in education."

"I congratulate you on the intensity of your study, and I thank you for endeavoring to aid in the most important work of teacher training."

Posttesting

Posttesting operations followed the identical design adopted for pretesting. The Teacher's Mailboxes and the attitude questionnaires were again kept as separate and distinct transactions. The posttesting took place approximately three months after the institute, in November and December. This schedule was selected to avoid, if possible, the pre-Christmas activities, but to allow sufficient opportunity for a teacher to transfer and translate into his daily teaching some of what was learned at his summer institute. Whether teachers can reasonably be expected to exhibit significant behavioral changes directly attributable to the institute experience, after only three months, is questionable. We were aware of the dangers of trying to measure impact so soon after the end of the institute program, but practical considerations forced us to adopt this schedule.

Posttesting operations began with a letter informing teacher-participant that the posttests were to follow shortly. This letter was sent to all teacher-participants who had initially agreed to participate in Project 2. With more flexible deadlines for posttest returns, we tried to obtain as many returns as possible by sending follow-up reminders. Our first such communication was a letter further explaining the need for full cooperation from all participants, if, indeed, Project 2 was to be a valid analysis. Our second notice was a postcard to remind participants of the approaching extension deadline, and the final reminder was a letter from the U. S. Office of Education.

Table 13 shows the posttest returns in terms of our predictions and obtained results. Similar to the pretest table, Table 13 consists of three parts: results by subject matter area for: (1) the Teacher's Mailbox, (2) the attitude scales, and (3) both the Mailbox and attitude scales combined. This information is based on the number of pretests we obtained in the spring. This number is 625 for all disciplines, and becomes the total group (100 percent) on which we based our posttest predictions.

Originally, we predicted that 40 percent or 250 teachers would return the Teacher's Mailbox materials. We found 53 percent or 329 participants returned Mailboxes, with teachers of the disadvantaged returning the fewest (45 percent) and, surprisingly (in view of their earlier performance), history teachers providing the highest returns (58 percent).

Similarly, the obtained attitude scale returns are all higher than our predictions; that is, 342 teachers in all four subject matters, or 55 percent returned the attitude scales, as against our prediction of only 250 teachers (40 percent). Again, we find history teachers providing the highest returns (58 percent), and those teaching the disadvantaged returning the fewest (46 percent). This same picture holds when both the Mailbox and the attitude scale returns are combined.

These data, we believe, show that our sampling scheme was an efficient one. The results also appear to conform to our hypothesis that lowered pretest returns resulted from the spring mailing schedule which took place during the feverish last weeks of the semester.

Table 13

Project 2 Posttest Returns

Tests by Subject Matter	Tests Sent Out n	%	Predicted Returns n	%	Obtained Returns n	%
(1) Teacher's Mailbox	625	100	250	40	329	53
Educational Media	223	100	89	40	127	57
History	127	100	51	40	73	58
Political Science	114	100	46	40	57	50
Teachers of Disadvantaged Youth	161	100	64	40	72	45
(2) Attitude Scales	625	100	250	40	342	55
Educational Media	223	100	89	40	128	57
History	127	100	51	40	74	58
Political Science	114	100	46	40	66	48
Teachers of Disadvantaged Youth	161	100	64	40	74	46
(1) and (2) Combined	1250	100	500	40	671	54
Educational Media	446	100	178	40	255	57
History	254	100	102	40	147	58
Political Science	228	100	92	40	123	54
Teachers of Disadvantaged Youth	322	100	128	40	146	45

Thanking the Participants

The PROJECT IMPACT staff felt a deep sense of gratitude to every teacher who worked on Project 2 instruments. We were always cognizant of the amount of effort required of participants, even though we were unable to reduce the work load without jeopardizing validity and reliability in evaluating institute effectiveness. To express our appreciation, if only in a very small way, we included a note of gratitude in the final packet of attitude materials we forwarded. We wish we could have done more, but hopefully the intrinsic and altruistic reasons cited by the teachers themselves, for their cooperation and participation in Project 2, were the real rewards.

WHAT WAS FOUND

The Samples

General Comments

Who attended NDEA summer institutes in a particular subject matter area? How best may we characterize the participants we worked with? How similar were they to other institute participants? How representative of teachers as a whole? Our concern with the nature of our sample was twofold. The first purpose sought to answer queries much like these, hoping to indicate the representativeness of our sample to the much larger group of teachers who attended NDEA summer institutes in 1967. The second purpose centered on obtaining appropriate and detailed information to describe our specific pre-post sample.

Since populations can rarely be studied exhaustively, almost all research must depend on samples as a basis for describing population characteristics. We particularly needed sample-population comparisons because we used a mail approach where the proportion of respondents who return materials can be a crucial indication of the representativeness of the sample.

A common, although not always available, technique for determining the representativeness of a sample is to compare one or more combinations of the respondents' qualities with those in the group who do not respond. More often than not, however, such evaluations are not possible since characteristics other than those being investigated are not measured. Project 2 was especially fortunate in being able to obtain this kind of information from the Application Record Cards. We selected 14 items for comparison, eliminating those which were inapplicable or non-quantifiable. These characteristics were grouped in two overall categories: (1) characteristics describing the institute teachers, and (2) those depicting the participants' home schools.

Political Science

The sample of 28* participants attending our 1967 political science summer institutes was very similar to the much larger group of 426 participants. On those variables describing the personal characteristics of participants, we found that our sample did not differ significantly from the total group of participants on any variable.

Our sample of political science participants did differ significantly, however, on one variable describing a respondent's home school; that is, the type of school. Three quarters of our sample were teachers from public schools, whereas over 90 percent of the institute participants taught at this type of school. The remaining 25 percent of our sample were from private

*The number of respondents in each area does not always correspond with the obtained number in our samples because the Data Bank tape did not include information for all 1967 summer institute participants.

schools, especially church-related. We should point out that a second variable approached statistical significance. More teachers in the pre-post sample taught in schools with enrollments between 500 and 1,000 pupils, in contrast to the larger group, most of whom taught in schools with enrollments of over 1,000 students.

Characteristics of the Sample. From additional demographic data, we get the following picture of political science participants. Men outnumbered women participants by more than four to one, no doubt a higher proportion of men than is usually found among teachers. The typical institute participant had taught an average of ten years with almost 40 percent reporting more than ten years. These experienced participants were also well educated, 50 percent having obtained master's degrees. Surprisingly, however, most of the master's, as well as the bachelor degrees, were not in political science, the subject field of the institute. The sample participants appeared similar to other groups in the attendance at institutes, about 70 percent never having attended an NDEA summer institute before. Finally, the vast majority of teachers in the sample (96 percent) taught at a single school, with the remainder having some form of split appointment.

Characteristics of Participants' Home Schools. Participants appear to have come from most sections of the country with the midwestern and western states tending to be over-represented, as almost 60 percent of the group came from these two areas. In contrast, the southern states tend to be under-represented, fewer than 20 percent coming from this geographical region. Participants' school locations were distributed more or less according to those in the general population, with the largest group of participants coming from cities or towns of 2,500 to 50,000 population and the smallest number being from cities or towns of less than 2,500 or from rural areas.

Over 50 percent of the participants were employed by schools with enrollments between 501 and 1,000 students. A sizable group (30 percent) were employed by large schools (enrollments greater than 1,000), with the smallest group of teachers (19 percent) teaching at small schools. Regardless of size or location of the schools, but in keeping with the level of the subject matter, over half of the institute participants taught at junior-senior high schools rather than elementary schools.

History

We were pleased to find that the personal characteristics of our pre-post sample of history participants closely represented the total group of teachers who attended U. S. history institutes during the summer of 1967. Only the variable of sex showed a statistically significant difference. Our pre-post sample contained a higher proportion of women than did the full sample of history institute participants.

On characteristics describing the participants' home schools, we found additional differences between our pre-post sample and all other history participants. Proportionately, our sample contained almost twice as many teachers from private, church-related schools (elementary and secondary) than was descriptive of the total group.

Characteristics of the Sample. In attempting to describe the history teachers in our sample, we found that they were youngish, with 71 percent being under 40 years of age. Related to this characteristic was the fact that approximately two-thirds of these teachers had taught for 10 years or less. We also found our pre-post sample to be well educated, with almost half having earned their M.A. degrees. While a majority of this group (58 percent) had been history undergraduate majors, a very small minority reported previous institute attendance (11 percent).

Characteristics of the Participants' Home Schools. The great majority of history teachers (79 percent) were from the public school system. Over 60 percent of the participants taught at the smaller schools, enrollments of 1,000 or fewer, and almost three-quarters were employed by junior and/or senior high schools. The midwestern and western geographical regions dominated, accounting for 62 percent of the sample, while 15 percent were from the northeastern portion of the country. The south appeared adequately represented, accounting for one-quarter of the sample. The school locations of our pre-post sample participants tended to be evenly distributed (between 18 and 29 percent) among the four population categories ranging in size from large cities ov r 250,000 to centers of fewer than 2,500 people.

Educational Media

The pre-post sample of 115 media specialists attending NDEA institutes during the summer of 1967 appeared much like the larger media group of 972 in attendance. Of the eight variables describing participants' personal characteristics, our sample differed from the larger sample in only one respect--field of graduate major. A somewhat larger percentage of the pre-post sample (13 vs. 8 percent) had graduate degrees in educational media. This percentage difference, however, is probably of little practical importance since 94 percent of each sample reported no undergraduate degrees in this area.

On variables describing the participants' home schools, there was only one characteristic on which the samples differed; that is, the percent of black students enrolled in the participants' home schools. Both samples had a large majority of participants (about 90 percent) who were from schools which were predominantly white (75 - 100 percent).

Characteristics of the Sample. The average age for the 115 media specialists in our sample was approximately 40, with 54 percent of the group younger. As in the other three subject matter areas of our study, men outnumbered women, constituting almost two-thirds of our media pre-post sample. This group contained fairly experienced teachers, 56 percent reporting that they had taught for 11 years or more. A majority of the sample (53 percent) had earned their M.A. degrees prior to attending the 1967 media institutes, but, at most, 13 percent of these were in the field of educational media. Our sample is most likely composed of teachers who have transferred to this area from other subject matter fields.

Characteristics of Participants' Home Schools. The large majority (75 percent) of our pre-post sample was employed by schools in the midwestern or western region of the country, with the smallest percentage (5 percent) listing themselves as easterners. The northeast and southern sections were equally represented, each constituting about 10 percent of the sample. Most of the pre-post sample participants taught in the so-called smaller public schools of fewer than 1,000 students. And finally, our sample appeared equally divided between elementary and secondary positions, with each accounting for 43 percent of the pre-post group. (The remaining 14% were included in categories other than the two mentioned.)

Disadvantaged Youth

A review of the biographical data for our pre-post sample of 72 participants who attended institutes for teachers of the disadvantaged showed this group to be similar to the total sample of 1,068 institute participants. There were no statistically significant differences between the two samples for any of these personal characteristics. Similarly, on those variables describing the participants' home schools, we found only one statistically significant difference between the two samples, i.e., type of school where employed. Our pre-post sample was composed of a smaller percentage of teachers from public schools than was the sample of participants in general, thus containing a large proportion of teachers from private, church-related schools.

Characteristics of the Sample. Unlike teachers in the other areas studied, this group of teachers was composed primarily of females, with over 60 percent of the pre-post sample in this category. Their average age was about 39 years, with 59 percent being under 40 years. The number of years spent teaching tended to be evenly distributed among the four categories ranging from over 15 years to under 5 years. A sizable percentage (38 percent) had earned the M.A. degree, and some 10 percent indicated that their degrees were in the subject matter of the institute. Similar to the other subject matter areas, this pre-post sample also included a minority (11 percent) who had previously attended a summer institute. Finally, almost all of our teachers (94 percent) taught at a single school, the remaining 6 percent being employed either at the system level or at multiple schools.

Characteristics of the Participants' Home Schools. The southern, midwestern, and western regions of the country dominated the geographical distribution of schools as each of these accounted for approximately 30 percent of our sample. Only 8 per[illegible] of our teachers were from schools in the northeast, and only 3 pe[illegible] taught in the eastern region. Over 70 percent of the participants taug[illegible] the smaller schools, enrollments of 1,000 or fewer. Also of interest is that almost two-thirds of this pre-post sample were teaching in elementary schools. Not surprisingly, 50 percent of the participants were employed by schools having black student enrollments of over one-quarter, while 36 percent were in schools where more than 75 percent of the students were black. Most of our sample also came from schools in the fairly populous cities or suburbs of over 50,000 population, and only 13 percent were from towns of fewer than 2,500 or rural areas.

The Subject Matter Areas

A repeated measures analysis of variance design was used and interpretations of the results made by both the PROJECT IMPACT research staff and the subject matter consultants. Although there were no significant changes in Mailbox performance resulting from attendance at summer institutes, these results do not necessarily indicate that the participants did not gain new insights about subject matter content and teaching strategies, but rather illustrate the difficulties so frequently encountered in seeking to show pre-post differences. The present approach contributed, however, a new dimension by permitting clinical assessments of the institute program for future restructuring.

The Teacher's Mailbox allowed us to consider just such comparisons. Using: (1) the results of our analyses, (2) the written responses of the participants, and (3) the insights of discipline consultants, our subject matter specialists evaluated the summer institute program in terms of its effects on each teacher-participant, and the overall impact of individual institutes for improving the quality of teaching. Subject matter specialists were able to assess the styles and information used by the teachers in their simulated teaching procedures and judgments made for correcting deficiencies. These reports for the four subject matter areas follows.

Political Science*

As we pointed out previously, 1967 NDEA summer institutes in political science were held at 13 universities scattered across the United States. Each institute concentrated upon one or more Problems of American Democracy within the broad scope of political science, and each institute listed its own general as well as specific objectives. The objectives often reflected excessive optimism about what results could be obtained in a formal, limited institute setting. That is, they were, perhaps, often oriented toward an unrealistic expectation of what could be accomplished in the short span of a summer.

Teacher's Mailbox

Table 14 presents the Teacher's Mailbox returns by letter. Average Quantitative and Qualitative Scores are given for our pre-post sample. Tests of significance indicate that there are no statistically significant differences at the 5 percent level of significance between participants' achievement before and after attending the summer institutes. That is, our group of teachers did not improve their performance relative to the political science concepts and principles sampled by the Teacher's Mailbox and presumably discussed at the 1967 summer institutes.

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*This section was prepared by James Barth and William McClure.

Table 14

Average Quantitative and Qualitative Scores -
Political Science Mailbox

Letter No.	Quantitative Scores Pretest	Quantitative Scores Posttest	Qualitative Scores Pretest	Qualitative Scores Posttest
1*	7.7	7.2	3.7	3.3
2	8.1	6.9	3.3	2.9
3	33.1	27.1	3.1	2.9
5	23.7	19.0	3.3	3.2
6	10.6	10.4	3.1	2.9
7	11.1	8.6	3.1	2.8
9	17.6	18.2	3.4	3.5

* An average across topics

We were not expecting dramatic results since many teachers had been inadequately prepared to begin with in regard to contemporary approaches to the subject matter of political science. This is not to say, however, that the Institutes have not had other beneficial results. The almost universal enthusiasm shown for the Institutes in the responses to Letter 9 surely indicates significant merit, particularly in terms of improved perception of self and role.

We shall consider the Mailbox items in two groups, those emphasizing content (Letters 1, 2, 3, 5, and 6), and those emphasizing professionalism (Letters 4 °, 7, 8 °°, and 9). Nevertheless, each of the nine letters was very much a separate and distinct entity. Each letter had its own objectives, and each required specific scoring, analysis, and evaluation.

The Letters of Content

Letter 1. The participants were asked to discuss for the audience of a student newspaper two topics from a list of six. All topics were on selected problems of democracy, and included the following: (1) politicians have been known to buy votes; (2) presidents do not tell the public all the facts about wars; (3) instances of police brutality are not unusual; (4) free speech is sometimes limited by threats of reprisals; (5) the threat of force is sometimes used to keep blacks from voting; and, (6) some public figures are far from perfect in their private lives.

° Letter 4, requesting lists of equipment and supplies, was eliminated very early in our analyses because it was not amenable to what we believed was an appropriate evaluation. This letter did not structure the school situation sufficiently well to allow comparisons of equipment requests.

°° Letter 8, requiring participants to fill out a Professional Activities Questionnaire, called for descriptive information and did not lend itself to objective scoring; hence it is not included in the Quantitative and Qualitative Scores of the Teacher's Mailbox.

The intent of this letter was to see if the participants demonstrated three characteristics: ability to sense problems, ability to analyze process, and possession of an action-orientation toward finding solutions. Most respondents did not sense the existence of problems in the topics selected, or, if they did, they closed them off immediately through some standard answers or clichés. While a number of responses tended to be answer-oriented showing a reluctance to seek evidence, they were also typified by a certain moral passivity.

The most popular topic on the pre- and posttests was "Presidents do not tell the public all the facts about wars." This seemed to us a strange choice for teachers who are concerned with relevance, observable behavior, and inquiry. This topic deals with the one subject of the six most distant from the daily experiences of the respondents and the students whom they taught. The fact is that respondents rarely referred to personal knowledge or specific instances. Answers tended to deal with hypothetical cases, abstract concepts, and theoretical constructs, and to treat problems in terms of ideals and clichés. Perhaps they remembered that the local, the immediate, the real were likely to be more relevant.

Letter 2. This letter asked respondents to criticize a civics quiz containing 25 items which students were to mark as "Acceptable" or "Insufficient" statements about politics. Most of the 25 items included in the quiz were, in fact, clichés. The qualitative evaluation centered upon: (1) whether the respondent raised questions about proper use of the quiz; (2) whether he commented upon the quality of the quiz; and (3) whether he attempted to edit, change, or eliminate statements as a means of minimizing clichés.

Both pre- and posttest performance were, on the whole, of disappointing quality. This was somewhat surprising in light of the fact that teachers are constantly engaged in testing of some sort. Perhaps the difficulty can be traced to the crude quality of the instrument. Many respondents simply rejected the quiz as an evaluative device, implying by their lack of critical work that the quiz was hopeless. Some suggested that the quiz might be used as a means of stimulating classroom discussion. This kind of response indicated that a respondent recognized a bad test when he saw one. It did not, however, illustrate his ability to construct tests. Neither did it indicate his grasp of the subject matter.

Letter 3. This letter centered on survey design and content of the law pertaining to civil rights issues. Participants were instructed to cover three topics as part of a report on civil rights: (1) how to obtain the most accurate information about the civil rights law; (2) how to determine how concerned the community really is; and (3) how to find which local people are involved in making decisions. The responses were evaluated in terms of the list of sources of the law, the survey design, and the effort to identify local decision-makers.

We noted three common approaches in answering this letter. First, most participants cited various information sources, balancing these sources to avoid providing too "liberal" or too "conservative" a view on the civil

rights issue. Second, they demonstrated little familiarity with survey techniques. Finally, these respondents showed little acquaintance with the content and documentary sources of the civil rights law. We conclude that our respondents were probably not aware of the variety of approaches available for carrying out rudimentary community studies most commonly associated with a study of political behavior.

Letter 5. Letter 5 asked the participants to assist in rewriting a textbook to prepare teachers in the social science area. Unfortunately, these instructions were not clear in specifying whether the textbook under revision was to stress methods, whether it was to be a text on civics for teachers preparing to teach social science in secondary schools, or whether it was a textbook for use in the high school course itself.

The objectives of Letter 5 centered on:

(1) Educational Philosophy. Did the respondents show their understanding of the purposes of teaching civics?

(2) Method. Did the participants discuss methods and techniques for teaching civics courses?

(3) Content. Did the respondents comment on the content to be covered?

A number of respondents did not recognize the appropriateness of a discussion of philosophy at this point. In fact, it seemed to us that some respondents preferred to steer away from controversy, although not necessarily from "controversial" issues. As for the "ideal" civics course, many respondents unfortunately failed to specify the means by which to achieve this goal. They simply ignored the problem, and those who addressed themselves to it were perfectly content to conceive their role solely in terms of maintaining current course structure.

As to methods, respondents showed signs of awareness of the existence of a variety of teaching techniques which they identified as methods. The approaches they discussed were often not the most current ones. Although innovations were proposed, the emphasis still included the student as a passive learner. The child was to listen, he was to read, he was to memorize.

Letter 6. In this letter, participants were expected to distinguish between the behavioral and institutional approaches for studying political phenomena. Adhering to our simulation format, this letter required the respondent to outline a telephone call to answer a mother's inquiries about her son's poor work in the behaviorally-oriented civics course taught by our teacher, Richard Williams.

Some respondents admitted quite frankly that they were unable to deal with the problem. Not all responses were evasive, but a number were concerned primarily with the counseling function. It seemed to us from reading Letter 6 that our respondents tended to see themselves as counselors rather

than subject and methods experts. Similarly, if our profession is concerned with political behavior rather than structure, then we believe that the "behavioral revolution" has not, as such, reached our respondents' classrooms, either through undergraduate training or, as yet, through the summer institutes.

The letters on professionalism

The second part of the Teacher's Mailbox covers an evaluation of Letters 7, 8, and 9. These three letters were concerned primarily with attitudes, values, and professional teaching activities. The emphasis here was not only upon methods and techniques, but aimed at teachers spending time reflecting upon their professional experiences.

Letter 7. This item takes the form of a letter to a student who has just completed practice teaching and appears discouraged by the experience. Respondents were to answer several questions raised in this letter:

(1) Don't the kids get on your nerves at times?

(2) Is it really worth the effort to try to tell them how exciting and important it is to know about our democratic process?

(3) How do you feel about your students now that you have been teaching for almost three years?

(4) Would you select the same career if you had your college work to do over?

(5) Would you still prefer teaching at the high school level rather than at a college or university?

Respondents to Letter 7 appeared to agree that the teaching profession has the distinctive and generally rewarding task in American society of "molding minds." In contrast, statements indicated little interest in encouraging the student to develop his own abilities and qualities. The problem was generally not seen in terms of what was good for the student, what was consistent with his wishes or psychic needs, or whether he needed to identify and solve problems. The acceptable criterion adopted by many participants was "what is good for society."

Nevertheless, the evidence based on our sample of participants does question just how much knowledge the respondents had about teaching citizenship. Our analysis also pointed out that some respondents showed little change relative either to their teaching practices or in their verbal command of new concepts. We can only remind ourselves that assimilation of ideas, even under the best conditions, is a slow process. During the regular school year, most teachers are allowed little time for reading, for thought, for intellectual growth and development. Generally, they do not read the professional journals. To a great extent, therefore, they are dependent upon the popular press for their ideas, thus their tendency to emphasize the topical, the current, and often, the superficial. A five-to-six hour teaching schedule

leaves little time for experimentation. Architectural and political limitations must surely discourage it even further. In this light, the summer institutes take on a new importance, not because they lead to fundamental redesign of teaching, but because of their effect upon morale and perception. The institutes show that at last someone is concerned about teaching. As the teachers themselves, almost without exception, point out, the institutes permit teachers to meet and talk with other teachers. The opportunity to get away from the teacher's role with all its urgencies, pressures to conform, and intellectual and personal frustrations, and to retreat for a time in the company of kindred souls may yet prove to be the necessary foundation for educational reform. The brief institute programs may have provided this personally beneficial respite.

Practice teaching, the teacher's supervised apprenticeship in the profession, had been, obviously, a traumatic experience for most of our respondents. It came as no surprise to our 54 teachers that their make-believe friend, Carol, was depressed after her six weeks of practice teaching and was thinking of leaving teaching forever. One called it a case of "beginning teachers' jitters." Others described it in terms of morale and tended to see it as a continuing problem, extending even beyond the practice teaching period.

Letter 8. At this point, the Teacher's Mailbox offered a "Professional Activities Questionnaire" covering the three areas of professional journals and professional activities. Respondents were asked to check appropriate items, with the scoring system for Letter 8 consisting of frequency counts by item and category.

It was obvious from early returns that our teacher-participants were not joiners of professional associations. About one-third of the respondents belonged to the local, state, and national chapters of the Council for the Social Studies. They belonged to few, if any, history, political science, sociology, or other social science associations.

For the most part, our respondents did not read the professional journals. The one-third who received the National Council of Studies Journal stated they read it, but almost none of the others said they did. Furthermore, our results indicated that participants rarely subscribed to other scholarly journals.

The major professional activities engaged in by our sample of teachers included attendance at conferences, workshops, and lectures. Four semi-professional activities most frequently engaged in by our participants, activities not a part of their regular teaching loads, are in decreasing frequency order: (1) set up trip to county or city government offices; (2) chaperoned Saturday trip to county or city government; (3) supplied list of civics books to order for local public library; and (4) spoke with students about civics teaching as a career.

Letter 9. This letter asked participants to comment about their expectations of attending summer institutes (pretest) and their reactions to the institutes they had attended (posttest). Evaluation was directed to three points: (1) a discussion of how the institute would broaden the participant's

experience; (2) statements on the importance of the institute as a means of working out the participant's subject matter concerns and problems; and (3) information for updating and stimulating wider understandings in political science content.

The reasons most commonly cited in the pretest by the participants for attending institutes were that institutes: (1) permitted teachers to meet and talk with other teachers; (2) provided factual information; (3) presented new approaches to teaching; and (4) provided for professional growth. Post-test responses were generally the same, with the following variations. Participants: (1) now praised the institutes because they made it possible to work with experts; (2) commented favorably about the methods of presenting subject matter topics; and (3) were less concerned with graduate credit than they had been in the pretest. Examination of the responses to Letter 9 clearly indicated that institutes were well received by the respondents. There were few negative comments on institutes as such or on any aspect of a specific institute and its operation. This result reaffirmed the findings of many other studies on the widespread, enthusiastic acceptance of summer institutes.

Attitude Assessment

The pretest and posttest results for the attitude questionnaire are presented in Table 15.

Table 15

PROJECT IMPACT Attitude and Opinion Survey Results -
Political Science Participants

Subtest	Pretest	Posttest
Child-centered Approach	35.0	36.0
Teaching-centered Approach	17.4	16.4
Professionalism	20.3	20.3
Effectiveness as a Teacher	12.1	12.0
Traditional-Emergent Approach	80.3	84.7

The higher scale score for "emergent" value structures classified teacher-participants as likely to emphasize sociability, a relativistic moral attitude, group conformity, and enjoyment of the present. That is, the participants appeared to shift, at least in direction, from a "traditional" value structure characterized by respectability, thrift, self-denial, individualism, and orientation toward the future. The concern clearly reflected a child-centered approach. If this emphasis follows through in teachers' classroom behavior, then the institute process has, indeed, had an affective impact.

The operation of institutes, with opportunities to observe effective teaching in action, listen to those with educational expertise, and exchange ideas with colleagues, may, in fact, be key factors encouraging even greater pupil concern by attending participants. What we are saying is that the keen enthusiasm so often expressed by teacher-participants for NDEA summer institutes may, in reality, be a reflection of the opportunities to engage in just such pursuits.

The results of the other instrument for assessing teacher personality, The Allport-Vernon-Lindzey Study of Values are shown in Table 16. It is important to remember, before interpreting AVL score differences, that this instrument indicates only the relative importance of values for a given individual, rather than their absolute value or magnitude. Inspection of Table 16 shows no change in the pre-post scale scores for our sample of respondents. That is, none of the scale differences is statistically significant.

Table 16

Allport-Vernon-Lindzey Study of Values -
Political Science

Scale	Pretest	Posttest
Theoretical (Concern for Truth)	40.9	40.0
Economic (Utilitarian Inclination)	36.6	37.2
Aesthetic (Appreciation of Form and Harmony)	36.1	37.1
Social (Feeling for Others)	42.1	42.6
Political (Position on the Use of Power)	44.0	43.9
Religious (Cosmic Orientation)	40.1	39.1

History*

Accepting as its basic premise that the primary purpose of the 1967 NDEA summer institute program was to improve the knowledge, attitudes, and teaching skills of the teacher-participants, Project 2 sought to assess the impact of the institutes in U. S. history on those who attended them. As will be seen from the following discussion of the results, the data produced by these devices attested to certain strengths and weaknesses in the history institutes, and also generated a number of suggestions for the planning of future American history summer institutes.

*This section was prepared by Henry G. Waltmann, Donald L. Parman, and Floyd J. Fithian.

The Teacher's Mailbox

Although they overlapped at several points, the nine Mailbox letters fell into three general categories: Letters 3, 5, and 6 focused on subject matter and historical concepts; Letters 1, 2, and 4 emphasized instructional strategies; and Letters 7, 8, and 9 stressed professionalism. Letter 4, which asked the participants to list the types of teaching aids and equipment they believed necessary for efficient instruction, was discarded and is not covered in this analysis because it was widely misinterpreted by the respondents.

Average scores by letter are presented in Table 17.* Analysis of these data indicated that there were no statistically significant differences between pre- and post-institute performance. In view of the differences among the Teacher's Mailbox items, each letter will be considered independently.

Table 17

Average Quantitative and Qualitative Scores - History Mailbox

Letter No.	Quantitative Scores Pretest	Quantitative Scores Posttest	Qualitative Scores Pretest	Qualitative Scores Posttest
1	36.0	32.1	3.5	2.9
2	30.3	28.4	3.5	3.3
3	26.2	26.0	3.3	3.2
5	20.9	21.7	3.4	3.5
6	19.7	18.4	3.4	2.9
7	19.2	16.5	3.3	3.0
9	22.6	24.3	3.4	3.3

Subject matter and historical concepts

Letter 1. The first item in this series, devised as a memorandum from Mr. Williams, the school principal, asked the respondents to describe what they regarded as an ideal course in American history. They were urged to do so on the assumption that they had access to unlimited funds and had full control over personnel, curriculum, and materials. Essentially, this letter attempted to determine whether the history institutes had given the participants a fuller appreciation of what was needed to develop an effective course in their field. The participants' comments revealed, for example, that they were generally reticent in discussing the particulars of staffing, scheduling,

*Scores for Letter 8 have been omitted since a different system was followed to score this item.

and administering a special course, both in the spring and in the fall. Conversely, whether anticipating or reflecting upon the NDEA sessions, they readily expressed their views on the relative merits of topical, chronological, or problem-solving courses, on the necessity of close contact between teachers and students, and on the utility of certain classroom materials and teaching aids.

Letter 2. The second item in the Mailbox series was a letter from the addressee's superintendent requesting information on the development of a U. S. history course for the benefit of a visiting Canadian educator who was planning to introduce such a course in his country's schools. Basically, it asked Mr. Williams what he would present as a "typical" unit in an eleventh-grade American history course. In responding to this inquiry, the teacher was asked to comment on reading, reporting and writing assignments, classroom techniques, the use of special equipment, and student evaluation.

The results here seemed to suggest that some aspects of the teachers' unit planning were affected by the institutes. A comparison of their spring and fall comments implies that there may have been some shift in emphasis which did not show up on the overall statistics. Before attending the NDEA programs, the respondents commonly mentioned the need for group activities by their students, but were rather indefinite about how this need was to be fulfilled. In the fall, they were more exacting in their discussion of this matter.

Letter 3. The next item was a memorandum testing the recipient's knowledge of historical method. The school principal, Mr. Grant, asked for a brief outline of "the process by which historians work," stating that he needed this information for a debate with a school board member who was enthusiastic about the educational value of the "hard" sciences, but skeptical of the utility of the social sciences. In answering, the teacher was urged to expand upon the argument that history had a unique, generally accepted method, "based on certain rules of evidence and logical assumptions."

In general, the answers to this item point to these conclusions:

(1) the teachers who attended the institutes were generally convinced of the importance of what they were teaching;

(2) many of them found it hard to articulate the rules of evidence historians used, to compare these procedures with those utilized in science, or to explicate the relationship between teaching and research; and

(3) most of the respondents did not change or clarify their views on these matters after taking part in the institutes.

Letter 5. Written as a memorandum from the school principal, this item was a request for what amounted to a critical book review of one of the classics in historical interpretation. Having recently illustrated his acumen in this sort of exercise in an after-dinner speech, Mr. Williams was asked to spend twenty minutes analyzing one of the great works of Frederick Jackson Turner, Vernon Parrington, Charles Beard, Walter Webb, or any other

work of his own choosing. The major purpose of this communication was to determine whether the institutes had increased the participants' understanding and appreciation of interpretive history. If so, this could be regarded as an important educational contribution by the NDEA programs.

An examination of the respondents' remarks suggests that at least three factors may have accounted for the resulting posttest scores. First, for academic and personal reasons, the participants and their institute mentors shared a special interest in the relationship between contemporary and traditional scholarship in their field. To some extent, perhaps, they mirrored the growing inquisitiveness and sophistication of the younger generation, not content with knowing the who's, what's, when's, and how's of American development, but anxious to know why things happened and why they were and are important. Second, the study of basic historical interpretations was, perhaps, not only one of the more compelling aspects of the teachers' work at the institutes; it was also more concrete and manageable than some other assignments. The kind of information involved was conducive to short-term "gap-filling" and was easily transferrable. And third, in comparison with some of the more general questions posed in other letters, the summarization and evaluation of a single great interpretive work was an exercise which could be handled well in a brief reply.

Letter 6. The general subject of this letter was the meaning or philosophy of history. Attached to the letter were eight definitions of the purpose and value of history, quoted from notable historians with various backgrounds and viewpoints. The participants were asked to do the following: (1) select the definition which they preferred; (2) justify their selection; and (3) verify the authorship of each definition. The main purpose of the letter was to determine what influence the history institutes had on the participants' conception of history. In this regard, a teacher's ability to defend a particular definition of history was considered more important than the definition itself.

From the definitions they chose and the justifications they gave, it seemed to us that few of the respondents had a sophisticated, carefully reasoned, current philosophy of history. Instead, they had a rather vague and unsystematic set of ideas and emotions with respect to their discipline.

Professionalism

Letter 7. This letter covered many of the routine, but serious perplexities of teaching history in the public schools. The writer of the letter had just completed student teaching, had encountered several problems, and was asking an experienced teacher how he met these difficulties. Specifically, the participants were quizzed in regard to the following: (1) getting along with students, (2) overcoming student apathy in required courses like history, (3) making history exciting, and (4) remaining in public school teaching rather than moving to college teaching.

The message most clearly conveyed by this inquiry was that the history teachers were generally satisfied with their present positions and were not actively considering other jobs, particularly at the college level. In explaining their contentment, they frequently cited the rewards of working

with young people, including the pleasures of getting to know them personally and watching them mature. Several respondents stated that they were not attracted to college positions because of the "publish or perish" pressure that existed there. Even those who expressed an interest in college teaching were not highly critical of their current assignments.

Letter 8. Letter 8 in the Teacher's Mailbox asked the participants to fill out a Professional Activities Questionnaire before and after attending the institutes. The questionnaire called for information on their membership in national, state, and local organizations, on their subscription to and use of professional journals, and on their involvement in activities related to their teaching assignments.

In general, the statistical findings of this inquiry paint a disappointing picture of the institutes' influence on the history teachers' professional interests. The total figures on the number of professional affiliations, current and anticipated, on the number of journals subscribed to, to be ordered, and read, and on the number of activities attended, engaged in, or under consideration showed no posttest increases. Clearly, history teachers were neither joiners of professional societies nor readers of scholarly publications in their field.

Finally, a tabulation of the participants' replies with respect to their academic endeavors outside the classroom produced the most involvement in three activities: (1) library or book display work, (2) field trips, and (3) career planning. These results held for both pre- and posttesting.

Letter 9. In the pretest version of this letter, the writer, who indicated that he was undecided about taking a summer job, going to summer school, or applying for an NDEA institute, asked the would-be participants for advice on what to do. Thus, in effect, the respondents were asked what they expected to gain from their institutes. In the reworded posttest communication, the same writer attempted to find out whether or not the NDEA summer institute programs had lived up to the teachers' expectations. Hence, Letter 9 solicited some basic reactions on the value, as well as the strengths and weaknesses, of the history summer sessions.

The reasons the teachers most frequently gave for wanting to attend the institutes were practical in nature. By and large, they hoped to learn more about their field and exchange ideas with other teachers. In addition, many of them wished to improve their teaching methods and were anxious to know more about techniques involving student performance. Some were also motivated by the prospect of graduate credit, financial rewards, and academic stimulation.

After attending the institutes, the participants generally indicated the programs had fulfilled their expectations. In fact, their posttest responses cited some benefits which had not been anticipated. Once more, increased factual knowledge, contacts with other teachers, and new teaching methods received primary attention. Many respondents also stressed their appreciation for the academic stimulation and opportunity to read and study. On the whole, moreover, much of the pretest emphasis upon nonacademic matters (stipend, travel, graduate credit) gave way to an increased recognition of the value of professional training, exposure to specialists, and other academic activities.

Attitudes and Values

The results of the Allport-Vernon-Lindzey Scale of Values and the PROJECT IMPACT Teacher Attitude and Opinion Survey indicated that the history programs did not appear to modify the teacher-participants' values or attitudes. This was to be expected in view of the shortness of the summer sessions and the relative inflexibility of these personal factors.

The findings, shown in Table 18, invite at least three observations about the institutes and those who attended them. First, all the pre- and posttest scores fell within the normal upper and lower limits for this kind of analysis, although the political and economic figures were on the high and low side respectively. Second, the teachers showed no pre- and post-test scale score differences. Third, the order of importance which the participants assigned to these six values was not changed by the institutes. Ranging from greatest to least emphasis, that order remained: political, religious, social, theoretical, aesthetic, and economic.

Table 18

Allport-Vernon-Lindzey Study of Values - History

Scale	Pretest	Posttest
Theoretical (Concern for Truth)	39.5	39.3
Economic (Utilitarian Inclination)	36.5	37.5
Aesthetic (Appreciation of Form and Harmony)	38.3	38.5
Social (Feeling for Others)	39.9	40.0
Political (Position on the Use of Power)	44.3	43.9
Religious (Cosmic Orientation)	41.4	40.8

Meanwhile, the returns on the PROJECT IMPACT Teacher Attitude and Opinion Survey also followed a predictable course for all five scales. These results, presented in Table 19, show that the fall scores on the child-centered, professional, effective teacher, and traditional-emergent items which treated these matters were no different from the pre-institute scores.

Table 19

PROJECT IMPACT Teacher Attitude and Opinion Survey - History

Scale	Pretest	Posttest
Child-Centered	33.3	32.9
Teaching-Centered	19.7	18.3
Professionalism	20.7	20.5
Effective Teacher	12.1	12.2
Traditional-Emergent Value	82.6	82.5

Educational Media*

Updating the teachers' knowledge of educational technology requires a systematic approach to determining instructional problems and effecting feasible solutions to them. For this purpose, a new breed of professionals called media specialists has emerged since World War II to assist teachers in instructional improvement. Such specialists are relatively few in number and their levels of competence have typically been inadequate. The NDEA media institutes were thus designed to increase both the number and competence of media personnel in the elementary and secondary schools of the nation.

A large majority of the media institutes worked with beginners--teachers with some media responsibilities in individual school buildings or teachers desiring to assume such responsibilities. Librarians also took part in these institutes to help prepare themselves to assume some media responsibilities in the school library. There were, in addition to beginner institutes, numerous advanced institutes for the more experienced media specialists and a few institutes for teacher trainers. Thus, there was a wide range of experience and competence represented among the participants attending media institutes.

Quite clearly, a single institute, however effective, could handle only a few of the competencies required by a well-qualified media specialist. The evaluation effort described in this report, however, faced dealing with a heterogeneous sample population including both beginners and experienced media personnel as well as numerous librarians with limited backgrounds in teaching, and some classroom teachers, with a single test instrument.

The Teacher's Mailbox

In general, the differences between pre- and posttest Quantitative and Qualitative Scores on the nine Teacher 's Mailbox

*This section was prepared by Robert Kline.

Letters were consistently small and not statistically significant. These results are presented in Table 20. We also observed that on the pretests a number of respondents frankly acknowledged, at the start, their inability to answer the questions asked.

Table 20

Average Quantitative and Qualitative Scores - Educational Media Mailbox

Letter No.	Quantitative Scores Pretest	Quantitative Scores Posttest	Qualitative Scores Pretest	Qualitative Scores Posttest
1	17.2	18.2	2.3	2.5
2	10.2	10.3	2.8	2.7
3	11.2	12.1	2.4	2.6
4	12.9	13.2	3.1	3.1
5	14.1	14.1	3.1	3.1
6	69.9	75.5	3.7	4.0
7	13.8	13.9	2.8	2.8
9	10.3	11.1	3.3	3.5

The letters

Letter 1. The first item in the Teacher's Mailbox was a memorandum addressed to "All Media Coordinators" informing them that the Superintendent of Schools wished recommendations from each school on equipment they wished to have for copying purposes and for making transparencies.

An examination of the mean scores for Letter 1 indicated that our institute participants did not appear to be well informed about either duplicating machines or their uses in schools before they attended summer institutes. Our post-institute results, however, did not provide a more optimistic picture. These results suggest that a number of the institute programs probably did not include copying machines as part of their programs, or that they dealt with this equipment on a very limited basis. Supporting this observation is the fact that almost all of the respondents referred primarily to the machine with which they were familiar in their own particular school.

Letter 2. Letter 2 in the Teacher's Mailbox was a memorandum from the principal to his media coordinator. The principal indicated that he was to address the local Rotary Club and that he had decided to focus his remarks on the school's audiovisual program, primarily because questions concerning

expenditures for non-book instructional materials had appeared in the press. The purpose of this Mailbox Letter was to get the respondents to: (1) discuss the rationale of their commitments to a sound audiovisual program; (2) list the major points that form the foundations for their viewpoints; and (3) give specific psychological and theoretical bases of learning which apply to their points of view.

The responses offered to questions in this letter seemed to imply that more attention to the basic foundations underlying audiovisual programs in schools was called for in many institutes. The phrase "psychological and theoretical bases of learning" seemed to cause the respondents some difficulty. There was strong indication in the written replies that they were not familiar with these bases of learning. A superficial reason frequently cited for using media, for example, was "a picture is worth a thousand words" or "ten thousand words."

Letter 3. Mailbox Letter 3 was a memorandum from the principal to the audiovisual director. In this memorandum, attention was focused on instructional procedures, and, specifically, on how one analyzes content, including the identification of learning tasks and learning problems. The letter also referred to a student guide for previewing the films which the director had indicated he would like to prepare. The purpose of this memorandum, as an item in the Teacher's Mailbox, was to discover what the participants knew and understood about instructional development procedures.

Since the respondents were also asked to describe a student guide for previewing films and to explain how decisions regarding its development were determined, it appeared probable that attention was, in some cases, diverted from procedures for analyzing content and identifying learning tasks. It seemed to us that the responses given to this letter indicated that, whatever had been the expectations of the Mailbox development, little was done with either instructional development (a sophisticated process about which relatively little learning can be expected--particularly by beginners in a short summer institute) or with student film guides. If this conclusion does follow, then Letter 3 may not, in all fairness, have been a "good" item.

Letter 4. Letter 4 in the Teacher's Mailbox was a letter from a media coordinator in a particular school addressed to the media director of the school system. This letter revealed that the director had presented a science lesson to the district teachers which the writer had found stimulating and helpful, and which made him realize that he could and should give the teachers in his school more leadership. He then asked the director if he could give him a step-by-step description of how he works with a teacher on the development of a specific lesson.

The intent of this Mailbox item was to give the respondents an opportunity to: (1) set forth their criteria and procedures for the evaluation of media, and (2) indicate their approaches and techniques for assisting teachers in making decisions regarding the selection and use of materials in specific teaching/learning situations.

Participant responses indicated some exposure in the media institutes to the instructional development procedure. Since the diffusion and dissemination of instructional development information was a primary obligation of the NDEA Institutes, this question was an appropriate and important one. One reason indicated by the scorers for the relatively low posttest scores was that many respondents dealt with methods for distributing equipment rather than with the selection and utilization of media for improving the quality of instruction.

Letter 5. The topic considered in Letter 5 of the Teacher's Mailbox required respondents to describe: (1) how a media coordinator helps teachers locate instructional materials in the school, the system center, and other media centers, and (2) how he helps them locate commerical materials and equipment not available in any of these centers.

Respondents, in answering this letter, typically referred to their own school situations rather than to adequate or appropriate situations such as those that were most likely presented in the institutes. Some respondents also indicated strong biases and narrow views of alternatives in this area which were apparently not altered by institute experiences.

Letter 6. A memorandum from a state media director to all media coordinators plus a "Media Characteristics Matrix" constituted the sixth item of the Teacher's Mailbox. The intention of Letter 6 was to elicit information concerning characteristics unique to various types of media to determine how well informed the participants were with respect to essential knowledge about the "tools" of the media field.

In responding to the checklist, the institute participants tended to localize their answers. In part, this may have been due to the fact that numerous items on the checklist called for opinions. For example, one item was "textbooks are easy to preview." Obviously, if textbooks are readily available in a given situation, it is easy to examine them, but if textbooks are not readily available, then the situation is just the opposite. Similarly, to say that previewing films is difficult, or to say that it is easy, is entirely situational, depending on the availability of a film and/or projector.

Letter 7. Mailbox Letter 7 was a rather long letter from a teacher who had just spent four weeks working with teachers on the development of media for some South American units. The teacher was downhearted and disillusioned about her efforts to improve instruction through the use of media and frankly admitted her doubts about the efficiency of the new instructional technologies. The purpose of Letter 7 was patently to determine the rationale institute participants would present in the face of a direct criticism of media, and their use in teaching and learning.

We anticipated that the responses to this letter would show that participants, through their institute experiences, had developed a rationale and a methodology for working with teachers who have reservations about the use of media in instruction.

Why this did not happen is not evident. According to scorers, most participants wrote prolifically, but did not thoroughly develop their reasons for implementing media in the learning process. In partial explanation of this, the scorers surmised that the superfluous information included in Letter 7 may have caused some respondents to take a tangential course in formulating their replies. Generally, the responses fell in two categories: (1) answers such as, "we'll discuss this later over a cup of coffee," or "things will get better if you stick with it," and (2) generalities such as "sensory experiences are more lasting than verbal experiences," or other statements equating educational media with visual material.

Letter 8. Letter 8 in the Teacher's Mailbox was a questionnaire conducted on the professional activities of all teachers in the county.

The objective of this Mailbox item was to obtain a measure of the respondents' degree of professional commitment. An examination of the responses to this questionnaire raises some questions, however, about their validity. The inconsistencies between the pretest and posttest responses on actual and planned membership in national and/or state professional media associations seemed to suggest that the respondents read and responded to the questionnaire in what appears to be an almost whimsical fashion. In consequence, the data were questionable and it is difficult to draw generalizations from them.

In short, the nature of professional development as a consequence of institute attendance was not readily apparent from responses to the questionnaire. It seems that participation in an institute was sufficient, at minimum, to foster an initial generation of increased professionalism. It is probably also correct to assume that in-depth changes in this aspect of professional behavior require more time to develop than the interval between the institute and the posttest administration, and it is, therefore, not surprising that our instruments did not measure such a change.

Letter 9. Two versions of a letter from a prospective institute participant to a committed participant comprise the final item in the Teacher's Mailbox. In the letter the participant was given before he attended an institute, he was asked to list the beneficial features or results he expected to find at the institute. In the letter he received after attending an institute, he was asked to indicate if the institute had met his expectations, and what its good and bad points were.

The responses to this letter were much the same as responses to this question for other disciplines. That is, most of the participants were very favorable toward the summer programs both before and after attendance. Favorable comments centered around staff, other participants, media equipment, and access to relevant literature. The few criticisms made primarily concerned general organization of specific institutes and the poor rapport between staff and participants for specific programs.

Attitude Assessment

We had anticipated that the institutes might have affected the attitudes and values of the participants. The results of the PROJECT IMPACT Attitude

and Opinion Survey, as well as the Study of Values, reveal no pre-post differences on the attitude dimensions measured by these instruments. For comparison purposes with the other subject matter areas, we have compiled these results in Table 21.

Table 21

PROJECT IMPACT Attitude and Opinion Survey -
Educational Media

Subtest	Pretest	Posttest
Child-Centered	37.0	37.3
Professionalism	20.1	20.8
Teaching-Centered	17.9	17.3
Effective Teacher	11.8	11.9
Traditionally-Emergent	84.7	84.3

Table 22

Allport-Vernon-Lindzey Study of Values -
Educational Media

Scale	Pretest	Posttest
Theoretical (Concern for Truth)	39.9	41.0
Economic (Utilitarian Inclination)	39.9	60.6
Aesthetic (Appreciation of Form and Harmony)	38.6	38.5
Social (Feeling for Others)	38.2	37.8
Political (Position on the Use of Power)	39.7	38.5
Religious (Cosmic Orientation)	44.2	42.5

Training the Teachers of Disadvantaged Youth*

This section deals with those institutes which were held in the summer of 1967 for the teachers of disadvantaged youth, conducted at 27 universities and colleges. Although the legislation under which the institutes were funded, Title XI of the NDEA was categorical in nature and specified the particular subject area under which teachers were to be trained, the extension of the legislation to include "disadvantaged youth" moved training into

*This section was prepared by Daniel Bernd and Ray Johnston

an area that could hardly be said to represent given disciplines in the same way that history institutes, English institutes, or political science institutes represented the disciplines specified by the law. There not being a discipline known as "disadvantaged youth," the legislative mandate to "increase the subject matter competency of teachers" could not be met by focusing upon the structures of a single subject, by dealing with defined problems within a particular discipline (such as Problems in American Democracy), or by increasing the identification with the professional group organized around a given discipline. Therefore, the question of target, or participant, was much more overriding in the institutes for disadvantaged youth than it was in the institutes which reflected particular subject areas or disciplines. The instructional programs of the DY institutes were wide-ranging, and dealt with such areas as the basic research and the basic theory from several disciplines on the effects of impoverishment, needed structural reforms in the schools, appropriate educational media and instructional aids, and ways of securing support for program development. Even the concept of "disadvantaged youth" varied among the 27 institutes. The disadvantages were described variously as mental disturbances, economic deprivation, ethnic differences, racial bias, and the special problems of the "slow learner." Thus, the DY institutes were organized around the problems of the ultimate clientele--the elementary and secondary children who were, in one way or another, educationally deprived.

It should be noted that, with few exceptions, the institutes were planned and developed by academics from Schools of Education and Social Work. The institutes themselves, except one, were housed in Colleges or Departments of Education. In 1967, very few institutes of higher education were conducting interdisciplinary programs dealing with the problems of disadvantaged youth. The basic theories, the conceptual frameworks, came from such disciplines as sociology, anthropology, political science, and psychology, but at the onset of the federally supported programs, it must be remembered that their staffs were drawn mostly from those interested in applying theory rather than developing it, and that very few training programs for such teachers existed. The institutes, then, were concerned not so much with retraining or upgrading a particular defined class of teachers, but in creating a new class.

Some of the complexities arising out of these facts were reflected in the proposals. The institute participants varied widely in background, interests, and occupational role. Concerned with a ripple, or multiplier effect, some institutes attempted to recruit administrators and teacher-trainers as well as teachers. Most programs (22) selected either 30 or 40 participants, four had 50 or 60, and one attempted to train 80.

Even granting these variations, and granting the lack of a definable interdisciplinary subject matter, the DY institutes still had enough similarities to justify their being classified under the same rubric. All of the DY institutes considered themselves as agents of social reform, particularly by wishing to increase the number of professionals involved with DY. Most institutes relied on consultants from the relevant social sciences to present cross-disciplinary alternatives. Every institute made an effort to

select its participants on the basis of background, experience, and motivation. Every institute was required to bridge the gap between theory and practice by giving participants field experience in, as the Office of Education Guidelines stated, those areas where live the "environmentally disadvantaged."

Of the preceding, there is little doubt that the sense of mission, of the teacher and teacher-trainer as change-agent dealing with a particularly defined group of students, is the constant in the variable DY institutes. The U. S. Office of Education Guidelines assumed that certain psychological and social characteristics most often associated with poverty could be changed through knowledge and through attitudinal training, and these assumptions were reflected in the individual institute programs.

The evaluative question is, did the DY programs, in fact, train their participants to better deal with the problems of teaching disadvantaged children? Did the participants become more "professional" after attending a DY institute? Can they exhibit the skills and transmit the knowledge the institutes were designed to give them? PROJECT IMPACT, of course, is the study designed to help answer those questions, and to help pinpoint the difficulties involved in asking them.

The results shown by the instruments used by the IMPACT staff (the Teacher's Mailbox, the Attitude and Opinion Survey, and the Study of Values), when applied to DY institutes are much the same as the results shown by these instruments when applied to institutes in history, political science, and educational media. That is, the participants consider the institutes to be worthwhile and positive experiences, but we cannot show that their post-institute level of competencies tests any higher than their pre-institute level. The teachers do not show any significant change in their values as a result of attending a summer institute, nor do their tested attitudes show much difference (Attitude and Opinion Survey). Given simulated tasks, they did not score significantly different after the institutes than before.

But to say that the test scores do not show significant differences is not to say that the test instruments were not informative. Particularly in the area of disadvantaged youth does the process of constructing the test clarify the structures of the subject, those concepts and skills which are considered to be relevant in the teaching of these teachers. And the test results, because of the questions asked, reveal the difficulties involved in achieving the overall goal of the institutes--social change. An analysis of the Teacher's Mailbox as used with participants in DY institutes is especially useful in what it suggests about the gap between the objectives of training programs centered in higher education and resultant teacher behavior in the schools.

The Teacher's Mailbox

Whatever the results of the test, and whatever the efficiencies of simulation devices in yielding pre- and posttest results in short-term training programs, the Mailbox does reveal what the field itself considers to be important. The failures of the teachers to demonstrate that they learned what the experts in the field thought they should know gives some rather clear hints of how training programs should be changed in order to face the realities of the school situations. The following analysis of the nine letters to which

the DY participants were asked to respond indicates what some of those realities may be. But analysis of the Teacher's Mailbox results does raise a wealth of questions for people in the field itself and suggests possible directions for further investigations. The Mailbox results are presented in Table 22.

Table 22

Quantitative and Qualitative Mailbox Scores - Teachers of Disadvantaged Youth

Letter No.	Quantitative Scores Pretest	Quantitative Scores Posttest	Qualitative Scores Pretest	Qualitative Scores Posttest
1	22	20	3.2	3.5
2	18	18	2.7	3.1
3	20	20	3.1	3.3
4	24	23	3.3	3.1
5	11	10	3.1	2.8
6	40	37	3.2	3.4
7	12	11	3.6	3.4
9	20	24	3.1	3.5

The letters

Letter 1. The first letter to Richard Williams of Lindenwood School in Linden City is from another teacher in another disadvantaged school and asks for advice in dealing with "restlessness and constant interruption by the kids." The respondent is asked also to indicate what psychological theories are relevant to the problem.

The assumption behind the question here is that competent teachers in school situations of the kind described will move toward a more open and less punitive attitude, will not stereotype the behavior, and will be able to consider the behavior in the light of some stated psychological theory.

Letter 2. In the second letter, Richard Williams is asked by the chairman of an "Ad Hoc Committee for Violence Control" to consider whether a policeman should be placed in the school hallways in order to control rowdiness, uproar, and student violence against teachers.

This letter was designed to elicit responses that indicated to what extent the institute participant was prepared in the techniques of conflict analysis and negotiation. The responses were scored 1 to 25 on a continuum. The acceptance of police control as correct and proper scored low, and suggestions for program analysis of root causes scored high. The assumption

was that such problems were better handled by student and negotiation-oriented individuals, and that control-oriented, non-negotiators, were not likely to handle the problem well. Most teachers, however structured, apparently maintain non-negotiable areas where control is deemed necessary. From the point of view of planning, educational systems should probably take cognizance of this desire for stability.

Letter 3. This letter is concerned with means and methods. Williams is asked by a college professor preparing a methods text to describe the strategies and philosophies behind an ideal course. The central problem is described as one of capturing the interest and imagination of the turned-off disadvantaged youth.

The letter clearly calls for responses that go beyond standard approaches, and is intended to discover the participants' knowledge of the pedagogical techniques, educational media, and experimental methodology appropriate in disadvantaged schools.

Letter 4. The fourth letter attempted to get at the question of professional sophistication and awareness. Richard Williams is asked, in this letter, to supply information to a foreign educator on current programs for the disadvantaged and to comment on their objectives, substance, and effectiveness.

The assumption behind the letter is that high scores are indications of professional commitment to the field and of the methodology and structures of the discipline.

Both Letters 3 and 4 attempted to get at the questions of appropriate course content and of knowledge of the field. The scores suggest that the university faculty members' expectation of public school teachers are not met. An analysis of the results suggests that teachers remain structure and course content-oriented (in keeping with most of their educational experience), and are reluctant to adopt new pedagogical methods and to innovate and experiment. Further, participants maintain a provincial rather than a cosmopolitan attitude to available program solutions to the problems of disadvantaged youth. These results suggest that it is difficult for a retraining program to change the styles of teachers in the face of the immediate influences upon them. That is, faced with an educational system that is structured toward course content, the teachers will continue to respond to that system, whatever they have learned about its deficiencies.

Letter 5. In this letter, the principal of Lindenwood School asks Richard Williams for specific knowledge of appropriate tests for disadvantaged children, and requests a "brief description of how we go about or should go about evaluating the disadvantaged students in our school...."

The responses to this letter were scored to determine the participants': (1) knowledge of recent findings regarding reliability and validity questions on standardized tests, (2) knowledge of recent developments of non-verbal evaluative techniques, and (3) knowledge of new trends and programs in testing and evaluation.

This letter attempted to measure the impact of the institutes upon the participants' knowledge of: (1) the shortcomings and inequities of standardized testing, and of (2) alternative means of student evaluation. The results suggest the power of testing as a status and control instrument.

Given a very firm and clear belief on the part of the experts that present evaluation and test instruments are not only inadequate in dealing with disadvantaged children, but are positively destructive, and given a group of highly motivated participants, and given the fact there are new programs and new trends in testing and evaluation, why do the posttest results fail to show that the teachers learned anything that they were willing to apply?

The results from this letter are particularly interesting in what they suggest about the problems of educational reform. Given the task which requires them to indicate what they actually would do, in a real situation, the teachers revert to conservatism, to the old ways. Testing is a way of exerting power, of having influence in the school, and the teachers did not feel supported enough by their actual school situations to try to effect changes.

Letter 6. Here, Richard Williams is asked to assume the role of educational planner and to design an ideal program, both for buildings and facilities and for curriculum. The task set was to ignore the obstacles at Lindenwood School and to "imagine you are setting up ideal arrangements for handling disadvantaged youth at Erewhon School."

Perfect participant response in the design of the new school would include the involvement of pupils and a broad community population in basic decision-making, would relate the plant facilities to the community, would specify the curriculum and the media, and would include an upgraded system which specifies an individually oriented teaching methodology across all courses and all fields.

Letter 7. In this letter, a prospective teacher asks Richard Williams how he really feels "about dedicating yourself to such a cause, now that you've been teaching them day after day for almost three years." The prospective teacher is discouraged at her own practice-teaching experience and couches her concern in emotionally loaded terms.

Rather than scoring the participants for personal dedication alone, the responses were also judged in terms of how well they moved away from moralizing toward giving professional answers. This letter was designed less to measure "improvement" and more to discover how the teacher's conception of his role changed as a result of the institute.

This letter presumed that attendance at an institute would affect the kind of recruiting advice one would give, and that answers would move away from moralizing to professionalism. The results suggest that the disadvantaged youth movement is still in its early organizational stages, and has not yet moved into the stage where it attracts individuals who view the work as a matter of professionalism, although it is tending, as a movement, in that direction.

The manner in which the participants performed the tasks of the Teacher's Mailbox rather strongly suggests that changes are very difficult to bring about in education if we ignore the total system within which teachers work. The author of changes and innovations often finds himself alone, ignored by his colleagues and resisted by his superiors. Any program for the training and retraining of teachers must take cognizance of the fact that the pressures against change often appear to the teacher as being very much greater than the pressures for change. It should not be surprising that the data from the Teacher's Mailbox revealed this conservatism in action.

Letter 8. Letter 8 is designed to discover the participant's conception of his role as a professional in affiliation with other professionals. Richard Williams is asked what organizations he belongs to, what journals he subscribes to and reads, what workshops and meetings he has attended, and what his future plans are. He is also asked for "personal comments concerning professionalism of teachers...."

The task set assumes that a measure of a teacher's commitment and understanding of his field is in his professional activities.

Letter 9. The crucial question asked in this letter is whether the participant would recommend applying to an institute to another teacher. Richard Williams is asked to jot down a list of the "beneficial features or results" of the Institute. (The pretest letter varied slightly in form from the posttest letter. The first asked for expectations and the other inquired into results.)

The scoring of this letter was designed to reveal not only the commitment and attitude before the institute experience, but also how it changed, if it did.

In summary, if any one conclusion may be fairly drawn from the Mailbox as applied to teachers of disadvantaged youth, it is that training and retraining programs for teachers <u>alone</u> are not a sufficient condition for educational reform and that school systems as <u>systems</u> must be considered in the design of such programs.

<u>Attitude Assessment</u>

Tables 24 and 25 show the results of the attitude questions for teachers attending DY Institutes. These data, as in the previous subject matter areas, indicate no pre-post differences.

Table 24

Attitude and Opinion Survey -
Teachers of Disadvantaged Youth

Subtest	Pretest	Posttest
Child-Centered	38	39
Teaching-Centered	19	16
Professionalism	20	20
Effective Teacher Rating	12	12
Traditional-Emergent Values	85	86

Table 25

Study of Values -
Teachers of Disadvantaged Youth

Scale	Pretest	Posttest
Theoretical (Concern for Truth)	39.6	38.8
Economic (Utilitarian Inclination)	39.3	39.8
Aesthetic (Appreciation of Form and Harmony)	37.7	37.7
Social (Feeling for Others)	41.1	41.9
Political (Position on the Use of Power)	38.5	39.1
Religious (Cosmic Orientation)	43.8	42.7

Some Generalizations

The greatest success of the DY Institutes comes from the fact that by participating in the PROJECT IMPACT study, it appears that DY is a field of study, with its own conceptual frameworks and methodologies. The construction of the items in the Teacher's Mailbox, and particularly the construction of the scoring keys, focused the attention of the professionals centered in various disciplines onto the problem of describing a coherent structure of concepts, theories, skills, methodologies, and evaluative instruments by which the particular programs could be measured and compared.

This phenomenon suggests, perhaps, that more important than the question of what participants learned or did not learn is that there was indeed something to be learned, that disadvantaged youth is a describable subject.

(There is little doubt, for example, that the necessity to describe its subject matter through constructing a device similar to the Teacher's Mailbox would be a useful and revealing exercise for the field of English.)

Evaluation as an informative process, a process of clarification and suggestion, is much more important than evaluation as mere testing. Our real concern should not be to answer the simplistic question of whether the DY institutes were "good" or "effective," but rather the question of what we learned from the evaluation instruments that indicate what changes should be made to improve the training of teachers. The IMPACT study is particularly rich in what it suggests about the education of denied children. It suggests that we know a good deal, and it suggests that teachers positively want to be professionals, and value their association with the professionals in higher education (Letter 9), but it also suggests that making the school an agent of social change is a very difficult and complex undertaking. If they have succeeded in revealing the nature of the problem, then it can be said that the DY Institutes and the IMPACT study have done their jobs.

PROJECT 3*

THE PURPOSE

The major focus of Project 3 was to determine the impact of the NDEA summer institutes on the colleges and universities which hosted them. The NDEA institute program encouraged university faculty members to work directly with elementary and secondary school teachers. For many professors, this was a first experience. It was hoped that this interaction among subject matter academicians, department of education staff members, and teachers who attended summer institutes, would establish a new milieu dedicated to improving present educational procedures.

A third pilot study, Project 3 elected to sample a small number of institute directors and faculty members, seeking to learn of any implementation of institute practices in their normal professional activities as a measure of impact. The PROJECT IMPACT staff recognized from the start that such changes would probably be of an individual nature and, therefore, neither easily measured nor observed. We believed, therefore, that an in-depth personal interview with a staff member offered the most efficient and effective method for gathering the appropriate information. This approach permitted an interviewer the necessary flexibility to identify basic issues for better understanding and interpretation of the meaning of impact.

THE METHODOLOGY

The Interview Schedule

To insure that we obtained answers to important and relevant questions, we decided to use a structured interview schedule. This procedure of asking all participants the same questions maximized the number and comparability of responses while minimizing interviewer bias and intuitiveness. The PROJECT IMPACT staff, the interviewer, and our consultants then set about to develop the interview schedule based on the original guidelines established by NDEA Title XI for conducting summer institutes. The final items selected were based on the possible effects of the institute program on the subject matter specialists, the educators, and the participating teachers.

Accepting the pilot status of Project 3, we continued to include only four subject matter areas for study. These were the same four disciplines selected in Project 2: educational media, history, political science, and

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*This section was prepared by John Curry.

teachers of disadvantaged youth. Two considerations guided our selection of institutes: (1) university enrollment (we tried to choose three institutes in each discipline, according to university size: small, medium, and large); and (2) the number of years that these universities had hosted institutes, with two years required as a minimum. Our total sample, then, consisted of twelve institutes, three per subject area.

All interviews were conducted individually, with the interviewer traveling to each of the twelve colleges or universities to talk with as many institute directors, institute staff members, and related faculty members as possible. The plan to speak with professors who had not participated in the NDEA summer institute was adopted to provide as complete an evaluation of institute effectiveness as possible. Difficulties of scheduling and meeting arrangements precluded obtaining the same number and types of interviews at all twelve host institutions.

Interviews were tape recorded where possible, with approximately 90 percent of the interviews so handled. All interviewing was done during the fall semester following the 1967 summer institutes.

Scoring the Tapes

Most of the taped interviews were brief, averaging about thirty minutes. Much of the information served to describe the questions asked by our interviewer. The scoring procedure adopted was a content analysis.

To perform the content analysis, each of two independent scorers listened to each interview in its entirety, recording all questions and answers, but deleting responses which seemed unrelated to our meaning of impact in this study. A single scoring key was found satisfactory for all four disciplines since interviewing variability was greater within a content area than among the subject matters.

Scoring was a tabulation of the frequencies of responses to each question across people; no individual was given a score of any kind, nor was any attempt made to weight the responses according to any predetermined definition of impact. Two raters independently scored each tape.

Comparison of the frequency distribution obtained by the two scorers revealed low agreement on a few of the answers and only moderate agreement on many of the answers. It should be noted that inter-rater agreement was not obtained quantitatively, but was determined roughly by comparing the two sets of scoring sheets for each question.

There are several explanations for the generally low correspondence between the two scorers: (1) phrasing of questions was not constant across interviews; (2) wordiness and irrelevant rambling obscured the answers to some questions; (3) some of those interviewed contradicted themselves; (4) not all answers and comments could be handled by the scoring instrument; and (5) some of the discrepancies were scoring artifacts which resulted from differences in the wording of answers.

THE INTERVIEW RESULTS

General Comments

Several comments were made during the interviews which were specific to individual institutes and were not, therefore, included in the regular scoring. A brief discussion of these comments by subject matter area follows.

Educational Media

Staff members from educational media institutes appeared favorable toward the institute experience, and they reported more overall change than did the respondents from any other discipline. One director stated that:

> The whole field of audiovisual professionalism has grown as a result of these institutes. While there have been quite a few big milestones in the development of media in education in the last 25 years, probably the Title XI program in media is the most significant milestone that I have seen.

Other directors felt that one important way in which the institute programs helped was in the discovery of new talent, particularly in the public schools. Some of these institute participants have become media leaders within their own states, and some have become known nationally. Similarly, some respondents stated that universities were now beginning to emphasize their educational media programs, and that this interest was probably due to the institutes, because former participants were known to be pressuring universities to offer these programs or improve existing ones.

History

Although the positive reports from the history institute faculty members tended to be guarded, with some negative comments, the most common positive comment concerned the pleasant, rewarding nature of the institute for every member of the institute staff. Some stated that the institute had awakened the faculty to its responsibility in improving teacher education.

One of the positive opinions voiced by a non-staff member of a history department was that the institute had helped the image of the department throughout the university. Similarly, another non-staff member from the education department stated that there had been great impact in terms of generating enthusiasm among members of the departments and that he, personally, had become interested in teaching in an institute. On the negative side, one director expressed the opinion that some institutes merely repeat the mediocrity of regular summer school programs, having little impact on their universities.

Political Science

Several political science staff members commented that the institute program had been a pleasant experience, especially in that it permitted contact with school teachers. In addition, it produced or increased the feeling of responsibility which their department now felt toward these teachers. The general environment of institutes was cited as a factor in encouraging the positive perception of participants toward different groups of people.

Generally, this area appeared to show the least amount of change, although some departments did modify their regular academic programs in some ways.

Teachers of Disadvantaged Youth

In general, respondents from this area were favorable toward the institute experience, some being highly complimentary and none voicing any strong complaints. An especially interesting report concerned the improvement in racial attitudes which was believed to be brought about by the integrated institute program. A staff member stated that improved attitudes were found in his own department, as evidenced by the hiring of more blacks and the admission of black students, and in the county school administration where, he said, the integration process progressed as much as ten years. Once the public school administrators saw how well integration worked in the institute program, they appeared more receptive to having blacks on the staff and in the student body. A member of another institute staff felt that his institute had also been successful in changing the attitudes of the participants toward disadvantaged students, particularly, black students.

Questions and Answers

The major results of this project consist of a variety of answers to the questions presented to institute directors and staff members in our sample. The complete analysis of our findings is shown in Tables 26, 27, and 28. The tables list each question asked, with frequency returns for the topics used in our content analysis. These results do offer interesting indications of institute effectiveness. In view, however, of (1) the small number of answers to each question, and (2) the nature of the procedure, we caution against any broad generalizations of the present findings, based on twelve summer institutes, to all NDEA institutes.

The following pages will present discussion of answers to each of the major questions asked in the interviews. These questions have been homogeneously grouped according to content, and are followed by an appropriate table.

Academic Practices

I. Have there been any changes in curriculum? One-fourth of the respondents indicated that there had been curriculum changes, and about half of those interviewed stated that such changes were planned or proposed, although not implemented. Major changes or proposed changes included areas offered for minor study and curricula for prospective teachers. Respondents from history and disadvantaged youth institutes accounted for most of the affirmations of actual curriculum changes.

II. Have there been any changes (increases or plans to change) in writing or research? More than half of the respondents replied negatively to this question, indicating either that they had no knowledge of any new writing or research or that the staff had already been doing much in this area before the institute. The remaining staff members indicated that new writing or research had been initiated, or at least that there existed an increased interest in research as a result of the institute. In some cases, new research or increased interest in research was derived directly from the institute experience, e.g., follow-up studies of institute participants were conducted by some staff members or directors. In other cases, the institute had reaffirmed interests which had existed for a considerable period of time. Contrariwise, one history department member stated that his writing had been interrupted by the institute.

III. Are there any differences in your teaching strategies or those of your colleagues? About two-thirds of those interviewed stated that the institute had resulted in changes or planned changes in teaching methods, particularly in terms of course content, use of textbooks and audiovisuals, and student teaching. Some staff members indicated that they were using more paperbacks as supplementary reading or that they were insisting that students be a little more aware of available books in the field, while others spoke of less specific changes, such as being jarred out of routine and regimented course presentations. Several faculty members spoke specifically of changes in advanced courses as well as changes in basic courses.

Certain changes in academic practices may have been easily identified by the faculty as having resulted directly from the institute experience, but other changes were probably difficult to relate to this summer program. The present data-gathering scheme is assumed to have elicited only information which concerned changes directly attributable to the summer institutes. There is the possibility, however, that the affirmative answers of some participants were based on conjecture about tangential relations of certain academic practices to the institute program.

Effects on Members of the Departments

I. What was the most significant gain or impact that you, personally, received from the institute? A majority of the institute faculty answered that the major personal benefit they derived from their institute involvement was either the enjoyable contact with the teachers who attended the

Table 26

Frequency of Responses to Questions in the Interview Schedule - Academic Practices

Questions and Responses	Total Responses n	% *	Educational Media n	% *	History n	% *	Political Science n	% *	Teachers of Disadvantaged Youth n	% *
I. Curriculum										
1. Curriculum change	7	25	1	13	4	57	0	--	2	29
2. Proposals for change	15	54	5	63	2	29	5	83	3	43
3. No change	6	21	2	25	1	14	1	17	2	29
II. Writing and Research										
1. Changes or increased interest	16	42	3	50	1	7	4	57	8	73
2. No change	22	58	3	50	13	93	3	43	3	27
III. Teaching Strategies										
1. A-V materials, textbooks, or paperbacks	12	32	3	50	7	44	1	33	1	8
2. Student teaching or course content	13	35	0	--	5	31	1	33	7	58
3. No change	12	32	3	50	4	25	1	33	4	34

* Total percentages may add up to 99% or 101%.

institutes or the increased awareness of teachers' problems and needs. The participants were described by one history staff member as being more interested in asking why and learning to understand the material than in memorizing facts in order to get grades. More than one-third of those interviewed felt that their major personal benefit had resulted from their different institute teaching experience, which some respondents described as a cause for their improved instructional methods.

II. Were there any changes in your attitudes or those of staff members? For example, were there any changes in attitudes toward public school teachers? Almost 80 percent of the respondents stated that the institute experience had brought about increased awareness of teachers' problems and greater interest in teacher education. Most of the remaining respondents indicated either that their attitudes had recently changed, but that they could not definitely attribute the change to the institute, or that they had already been concerned with teachers' problems before the institute. Several of those interviewed indicated that they had felt little, if any, concern for teachers prior to the institute, but that they now viewed the teachers as their professional colleagues, with tremendous problems.

The question of attitude changes was probably the most difficult one for which to obtain reliable responses, because of the problems associated with determining attitude changes, and because of difficulty in attributing perceived changes to the institute program. However, in the case of faculty members who had worked neither with teachers nor with a department of education prior to the institute, an increase, at least in awareness of teachers' problems, may have been fairly easy to identify and assign to the institute experience.

III. Have there been any differences in intra- and/or inter-departmental relations? About 40 percent of the replies affirmed that the institute had stimulated both closer inter-departmental and intra-departmental relationships. Changes in personal relationships among departments were usually easy to attribute to the institute. Some individuals who met initially while planning or conducting the institute continued to work together during the ensuing academic year. Increased or improved intra-departmental associations were probably somewhat difficult to attribute to the institute except in the case of marked changes in personal relationships, like the situation described by a history non-staff member who stated that his institute colleagues constantly discussed their experiences.

IV. Are you or the staff working differently (or more concerned) with students, graduate or undergraduate, who are planning to become teachers? Almost half of the respondents indicated that they were using new content or teaching methods in working with prospective teachers, and about one-third said that they believed themselves to possess increased sensitivity to the needs of prospective teachers. They believed that the institutes had caused them to realize that these students have a use for information which was different from theirs, that is, primarily for teaching rather than for research and writing.

Table 27

Frequency of Responses to Questions in the Interview Schedule - Members of the Departments

Questions and Responses	Total Responses n	%	Educational Media n	%	History n	%	Political Science n	%	Teachers of Disadvantaged Youth n	%
I. Personal Gain										
1. Personal contact with participants	10	27	2	22	4	44	3	25	1	14
2. Awareness of student teachers' needs	1	3	0	--	0	--	1	8	0	--
3. Awareness of teachers' problems	10	27	3	33	2	22	3	25	2	29
4. New teaching experience	5	14	0	--	1	11	3	25	1	14
5. No change	4	11	0	--	0	--	2	17	2	29
6. Improved teaching	7	19	4	44	2	22	0	--	1	14
II. Attitude Toward Teachers										
1. More sensitive	35	82	7	100	16	76	6	100	6	67
2. No change	1	2	0	--	1	5	0	--	0	--
3. Previously sensitive	7	17	0	--	4	19	0	--	3	33
III. Departmental Relations										
1. Yes	38	83	7	78	15	84	8	80	8	89
2. No	8	17	2	22	3	16	2	20	1	11

Table 27 (Continued)

Frequency of Responses to Questions in the Interview Schedule - Members of the Departments

Questions and Responses	Total Responses n	%	Educational Media n	%	History n	%	Political Science n	%	Teachers of Disadvantaged Youth n	%
IV. Working differently with student teachers										
1. Yes	12	70	1	100	3	43	3	75	5	100
2. No	5	29	0	--	4	57	1	25	0	--
V. Working differently with teachers										
1. Yes	8	28	3	50	3	23	0	--	3	33
2. No	21	72	3	50	10	77	2	100	6	67
VI. Working differently with professional groups										
1. Yes	12	46	4	67	6	60	0	--	2	33
2. No	14	54	2	33	4	40	4	100	4	67

V. Do you find yourself or other staff members working differently with teachers in the public schools? Fewer than 30 percent of the respondents stated that there had been an increase or change in the work which faculty members of their universities were doing in the public schools, although many of the remaining staff members said that there had already been much of this kind of activity prior to the institute. There were substantial differences among the four disciplines. The highest percentage of indicated change was educational media (50 percent), whereas no one interviewed from the political science institutes had observed such activity.

VI. Are you or are other staff members working differently with teacher, or other professional groups? Almost half of the respondents answered that they were working differently with teacher (or other) professional groups, and more than half of the remaining respondents stated that they had already had numerous associations with these groups before the institute. There were again marked differences among the disciplines. Sixty percent or more of those interviewed from history and educational media answered that they were working differently, or more, with teacher professional groups, whereas only one-third of the respondents from institutes for teachers of disadvantaged youth so stated. Again, no one of the political science staffs responded positively.

Institute Participants

I. Have any of the participants gone on, or back, to graduate school? The respondents reported here that they believed numerous participants had done post-institute graduate work or at least applied for such study. It should be remembered that the positive responses to this question did not necessarily mean that the participants were returning for graduate work at the university which hosted the institute, although this appeared to be the case in at least a few instances. We considered the responses to this question as more indicative of institute impact on the teacher-participants, and, therefore, on the teaching profession, than on the universities which conducted them. Further, it is difficult to evaluate the net effect of creating, with the participants, a greater interest in subject matter.

II. Is there any program of follow-up on the institute participants, or is there any feedback from the participants? Follow-up was usually in the form of newsletters, visits to schools, or informal meetings. Like the previous question, we felt that data on feedback and follow-up do not necessarily provide specific information relating the effect of the institute on the host institution. We would assume, however, that a university department which is following up its institute with any aid or assistance to the participants is demonstrating that it definitely has an interest in working with school teachers.

Criticisms and Suggestions

The final question asked of those who were interviewed concerned comments or criticisms which they might have about USOE's handling of the institute program. The most frequently advanced suggestion by both directors and staff

Table 28

Frequency of Responses to Questions in the Interview Schedule - Institute Participants

Question and Responses	Total Responses n	%	Educational Media n	%	History n	%	Political Science n	%	Teachers of Disadvantaged Youth n	%
I. Participants' Graduate Work										
1. Many	6	33	3	75	2	25	1	33	0	--
2. A few	8	44	1	25	4	50	1	33	2	67
3. None	4	22								
II. Follow-up or Feedback										
1. Feedback	18	40	7	44	7	54	3	33	1	14
2. No feedback	3	7	0	--	1	8	2	22	0	--
3. Follow-up (newsletters, meetings)	21	47	9	56	5	38	3	33	4	57
4. No follow-up	3	7	0	--	0	--	1	11	2	29

members was that a plan for systematic follow-up of participants should be included in every proposal, or that there should be a division in the U. S. Office of Education which would visit school systems. These plans would encourage working relationships with principals, administrators, and teachers in order to implement the suggestions of those teachers who had attended institutes. Some of the respondents stated that PROJECT IMPACT was the type of follow-up which they felt should be conducted.

Another frequent criticism was that there should be long-range funding of institutes in order to facilitate planning. One political science staff member stated:

> The time has come to get [the institute program] off the erratic, jerky, unplanned, unsystematic basis...and start thinking in terms of long-range proposals. Institutions can't plan...There should be some goals; there should be some systematic planning.

There was considerable comment about proposal writing and other negotiating which are necessary before universities can receive funding for conducting institutes. The lag time for approval of funding was cited as a problem in that it is difficult to get commitments from faculty and to structure the program months ahead. A history staff member suggested that the U. S. Office of Education have a pre-packaged institute program so that faculty members would not have to spend their time writing a proposal for funding. This policy would, of course, place the burden of innovation on USOE rather than on the host institution.

Another topic discussed concerned selection of participants. An interesting difference of opinion here, related to the ability levels of those who should attend summer institutes. Some faculty members believed that only "top echelon" should be considered, that is, those with advanced degrees, in addition to several years of teaching experience. Other respondents, however, preferred a diverse group of participants, differing widely in their ability and experiential levels; while a small number of those interviewed urged selecting participants on the basis of real "need."

SOME CONCLUSIONS

What indeed have been the "lessons" of the NDEA summer insitutute? While findings of the three PROJECT IMPACT studies did not answer all the questions, we believe that various results should be of interest to those who (1) shape and administer USOE policies, (2) direct and train teachers, (3) apply for and attend teacher-training programs, and (4) are charged with evaluating the impact of this kind of training. The one certain conclusion we offer at this time is that we learned a tremendous amount about the needs and preferences of teachers as well as of their trainers. To be parsimonious, however, we shall present some of the conclusions and observations proposed by the PROJECT IMPACT staff in conjunction with our subject matter specialists.

To begin with, it is probably unrealistic, and perhaps even unfair, to expect programs of the length, scope, and nature of summer institutes to make sweeping, radical, and immediate changes in the participants' knowledge, attitudes, and teaching practices. This is not to say, however, that by exposing teachers to information, ideas, materials, and methods which they are not likely to encounter under other circumstances, that they will not benefit. The institutes can complement and supplement, but not by themselves be responsible for, the educational growth that comes through independent study, experience, and graduate instruction. It may well be that their short-run impact is most likely to be seen in the transferral of selected subject matter concepts and techniques, although institutes commonly stress general topics which are expected to have a more profound, longer-lasting effect on the participants' thoughts and actions.

The rationale for conducting institutes was essentially sound, but our data have led us to conclude that many institute curricula were too demanding. That is, we learned from the comments and the actual performance of the teachers who cooperated in PROJECT IMPACT, that their past knowledge was not readily linked to the new, unfamiliar information and techniques of the institute program, in order for learning to be efficient. This is not to imply that the participants were not capable of achieving at the high level that many of the institutes had set. Some indeed did, and many others could have, had the conditions been more favorable.

Toward this objective, we would urge that the following recommendations, coming directly from participants' remarks, be seriously considered for all educational development programs.

1. Elementary as it may sound, we feel compelled to remind developers, directors, and trainers, that training programs must always be sensitive to the interests and needs of the participants. As pointed out by our specialists, it would make more sense to determine what potential teachers feel they should study than to depend on the proposers' impressions of what should be of concern to the teachers. This follows directly from our Project 1 data which showed unequivocally that the educational objectives and interests of teachers were at variance with those of faculty members and directors. Furthermore, attempts on the part of the staff and directors to perceive the needs of teachers were generally inaccurate. All of this underscores the importance of including participants in all program planning and development stages.

Certainly, it should come as no surprise, for after all, teachers are closest to children's needs and capabilities, and their emphases and orientations are going to be more in deference to children's learning habits and preferences.

2. Teacher-training programs should be relevant to a major and significant part of what participants themselves teach. Topics which are esoteric, highly specialized, or too remote from the usual school curriculum are a waste of time, effort and money.

3. Training should be practical in orientation. That is, it is important to develop a variety of materials which can be readily used by participants in teaching, during training and/or when they return to their classrooms.

4. We further suggest that training should be sufficiently flexible to allow individual participants to do some independent reading and study within the framework of the program. Here again, our subject matter specialists concurred that rigid schedules and arbitrary assignments tend to restrict the advancement and creativity of some teachers which in turn, probably inhibits children's motivation to learn and curtails their learning progress. Since we agree that teachers should encourage flexibility and understanding within their classroom, it becomes our responsibility to serve as models.

A feature of the NDEA summer institutes, most often appreciated by the participants and considered exceedingly beneficial, was the opportunity to exchange ideas with fellow teachers, institute staff members, and visiting specialists. Yet, little attention has been given to this function in the planning and execution of institute programs. We feel that a large percentage of participants would welcome such periods of time during which they could engage in more systematic dialogues concerning the everyday circumstances of teaching. In fact, it is our opinion that this arrangement would serve to reduce frustrations by establishing a receptive atmosphere for their expression. The stage is then hopefully set for positive acceptance of the new and the unfamiliar.

Finally, if any generalization may be fairly drawn from the PROJECT IMPACT studies, it is that there was widespread, enthusiastic, acceptance of summer institutes. Participants, in particular, felt that attending a summer institute was a stimulating and rewarding experience.